

MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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AND NEEDS NO CHECKREIN.

Mr. C. Fitzsimons, general manager of the Southern Cotton Oil Co., Columbia, S. C., in a letter to the MANUFACTURERS' RECORD, says:

I have always been in sympathy with the work of your paper. I will never forget the spirit of encouragement which you kept up during the period of five-cent cotton throughout the South, and your present enthusiasm over the general prosperity of this section and what the future will bring forth is more than warranted by the evidence that is shown by statistics in every calling in this section of our country. I generally read your paper on Sunday, so as to come down to my office on Monday morning holding my head up without the use of a checkrein.

If Mr. Fitzsimons and others will read papers on Sunday, then we are glad to have them read the MANUFACTURERS' RECORD. In that they will find nothing harmful, and possibly much that may be helpful. They will find none of the sensations, the report of scandals and murders and suicides and the dark side of life with which many of our Sunday papers are so largely filled. And if the reading of it is an inspiration to "hold their heads a little higher" and to be grateful that they live in a land so abundantly blessed as this favored section is, then the MANUFACTURERS' RECORD may prove, next to the Divine Word, the most appropriate reading that they can find for a few hours on Sunday.

PERSISTENT FOLLY.

A dispatch from Nashville states that the so-called "Southern Immigration and Quarantine Conference," which was made permanent last year, has again been made "permanent" under the name

of the "Southern Immigration and Industrial Association," and says:

The objects are to exercise an educational and supervisory influence over matters pertaining to immigration, health, labor, technical education and a general enforcement of vagrancy laws, in order that a uniform policy regarding these matters may prevail throughout the South.

Rather comprehensive scheme, this. Why not include good roads, race suicide, irrigation, river improvement, and everything else which concerns either the individual or the State?

And then the meat in the cocoanut:

Governors and State commissioners of agriculture, representatives from commercial, manufacturing and business organizations are made honorary members of the association. The active membership is to be composed of railroads, corporations, firms or individuals. The appointment of a vice-president from each State is recommended.

Now for the cash from the active members. Step up, gentlemen, and subscribe promptly and furnish useless pay for a scheme which can never accomplish any good.

You may have forgotten that the same process was followed in the case of the so-called "Southern Industrial Association" of five years ago under similar auspices, but that when a salary was voted by an "executive committee" the thing died.

ADVERTISEMENTS OF SOUTHERN LOCALITIES OFFERING SPECIAL ADVANTAGES FOR THE LOCATION OF MANUFACTURING ENTERPRISES WILL BE FOUND ON PAGES 76, 77 AND 78.

THRIFT IN A JEREMIAH.

Pessimism of the speech of President James J. Hill of the Great Northern Railway at Minneapolis a few weeks ago is explained by his speech at Chicago this week. At Minneapolis he set up a veritable Allhalloween Jack o' Lantern in the shape of lugubrious views about this country's going to the demimition bow-wows because it would have too big a population to be supported, because its native resources would be exhausted. At Chicago men who might have been alarmed by the bugaboo were pointed to the safe and sure refuge, the wiping out of custom-houses along the Northern borders of the United States and the establishment there of absolute free trade. He argued that the plea for more liberal trade relations between Canada and the United States is negatived only by "unreasonable individual selfishness," and he expatiated upon the "desirability of a free interchange of natural products and raw materials, giving to the New England manufacturer his fuel and to the farmer of the Western plains his lumber and to the makers of books and newspapers everywhere their print-paper free from the exactions which a needless tariff now permits monopoly to impose."

The ad hominem twist at the end of that sentence is enough to make the angels weep, to say nothing of the allusion to "unreasonable individual selfishness." It seems to assume that news-

papers will be diverted by an appeal to "unreasonable individual selfishness" from considering the main question. The main question is, Shall a limited and comparatively small section of the country which has amassed wealth and power under the operations of a protective tariff during the past 40 years be permitted to exert its "unreasonable individual selfishness" unrestrained, and, with the cry of "free raw materials for industry," to bring about a situation that will prevent the greater portion of the country, with its vast supplies of timber, coal, iron ore, hides and other raw materials for industry, from enjoying its proper, fair and due share of the benefits of the protective tariff. Before the press of the country takes the cue from President Hill and demands the wiping out of the tariff between Canada and the United States it might ask him to name the American owners, direct or indirect, of timber, iron ore, coal, etc., in Canada; to describe the relations, if any existing, between such ownership and certain so-called monopolies in the United States, and to state whether or not the earnings of the Great Northern Railroad are not sufficient to satisfy its owners without the proposed abolition of custom-houses. It is believed that "the individual selfishness" thus revealed might prove to be of the most reasoning and long-headed character.

COMMON SENSE IN IMMIGRATION

Mr. Edward Brobston of Jacksonville, Fla., who contributed much to the success of the meeting at Savannah, Ga., which resulted in the organization of the Georgia Immigration Association, proposes to be active in the organization of a similar body for Florida. He is deeply interested in the movement for immigration to the South, and is enthusiastic over the notable results of the experiment of landing at Charleston nearly 500 thrifty immigrants from the north of Europe and their distribution throughout South Carolina. He went to Charleston for the purpose of witnessing the disembarkation of the newcomers, and in an interview in the Savannah *News*, in which he gives credit to South Carolina and its Commissioner of Immigration, Mr. E. J. Watson, for the initiative step due to the eminently practical suggestion of the *Charleston News and Courier*, he says:

But there is a danger accompanying this immigration. These people are intelligent, and many of them are men of means and resources. If they do not find things as they were represented, they are the kind to make conditions known, and for this reason there is an element to be considered which would not accompany the lower class. On the other hand, if this experiment proves successful and if they are pleased, it will mean the immigration of hundreds to follow them.

I think the States should work separately, though in co-operation. We will have the benefit of the experience of South Carolina. We will be able to avoid the mistakes which have been made, but at the same time we have South Carolina to thank for stepping out and taking the first shot at it. We all need immigration just as much as South Carolina does.

Every student of the immigration

problem will agree with Mr. Brobston's argument that success in immigration work depends essentially upon truth in setting forth the advantages of the State to which one would attract settlers and kindness and liberality in the treatment of the newcomers. Naturally their first impressions of new surroundings will be most lasting and most influential in determining whether they are to be joined by others whom they left at home. The excitement of their change of abode is likely to render them peculiarly sensitive. The utmost consideration, therefore, must be shown them. For the best immigration agent in the world is a contented immigrant.

There may be with profit a certain degree of co-operation among the Southern States in immigration work—co-operation for the prevention of the unauthorized use of the Southern States in the promotion of the work of fake immigration agencies inside or outside the South, and of the furtherance of schemes at the expense of the South given color by the interest there in immigration, and for the discouragement of State authorities in giving countenance to "conventions," "conferences," "parliaments" and "congresses" dealing principally in hot air and reflecting upon the intelligence of the South.

The MANUFACTURERS' RECORD has noted with regret an inclination in certain quarters in North Carolina to embarrass the efforts of the South Carolina authorities to conduct the immigration movement upon a plan designed to benefit the whole State, and not for the advantage of particular individuals or interests. The best kind of co-operation among the States is in putting aside such petty and demoralizing jealousies, in welcoming, as Mr. Brobston has done, every act, such as that of South Carolina, as tending to set an example in practical work and to build up the South as a whole.

DON'T CALL IT SOUTHERN.

In its issue of September 20 the MANUFACTURERS' RECORD, referring to the plans for a meeting at Nashville of the so-called "Southern Conference on Immigration and Quarantine," and pointing out some of the absurdities of the advance notices, said:

In conclusion, we may state that we are thoroughly prepared to hear and to bear the suggestion to the people of Nashville that this contribution of ours to the gayety of nations is a "direct affront to Nashville and its people," the usual song and dance ladled out by the promotion of such farces.

Therefore, we were hardly surprised at receiving, in request for some information bearing upon developments at Nashville, a letter from Mr. Leland Hume, general manager Cumberland Telephone & Telegraph Co., containing the following:

In a recent issue of your journal you make what appears to us to be a most uncalled-for, undeserved and unworthy assault on the movement of the Nashville Board of Trade in its effort to accomplish good results through the medium of the Southern Quarantine and Immigration Convention. Indeed, you practically hold the idea up to

ridicule. Inasmuch as you have not assaulted the movement when applied to other cities, we can but feel the thrust at Nashville the more keenly.

Mr. Hume, who, we believe, is the president of the Nashville Board of Trade, is away off the track. If he be permitted to read a letter sent from this office October 5 to Mr. E. S. Shannon, secretary of the Nashville Board of Trade, declining an invitation to participate in the Conference, Mr. Hume will discover that the suggestion to him that the MANUFACTURERS' RECORD is unfriendly to the Board of Trade and has not criticised the conference movement "when applied to other cities" has absolutely no foundation in fact. The letter contained the following:

The kindness of the Nashville Board of Trade's invitation to me to attend a convention in your city in November in connection with the subject of immigration to the South is appreciated. But I shall have to decline it, for, as you probably are aware, I have little confidence in the Southern Conference plan of dealing with the immigration problem. In the first place, there have been during the past ten years, and especially during the past five years, so many abortive attempts at the Southern convention idea generally that, in spite of the earnest efforts of some Southern men to give a practical turn to the conventions that have been held, the idea appeals less and less to the great mass of men of affairs in the South, who, indeed, recognize in such gatherings possibilities of unintended injury to the South. In the second place, I am convinced that a conference on immigration assuming to speak and to act for the whole South can only embarrass the practical work being done by such States as Maryland, Virginia, South Carolina and Louisiana, or by organizations in such States as Georgia and Alabama, and I have had no reason to change my view expressed a year ago to the president of the Chattanooga Chamber of Commerce in declining his invitation to co-operate in an immigration convention at Chattanooga, and which is as follows:

"We have carefully studied the various phases of this convention movement for many years, and each new manifestation has only confirmed us in our belief in the futility, if not the folly, of such schemes generally.

"In the matter of immigration to the South, we have long since been of the opinion that its direction of control lies with properly constituted State authorities acting in concert with business organizations, transportation companies and individuals. What might suit Texas in the matter of immigration might be entirely distasteful to North Carolina, for instance, and the class of immigrants adaptable to Louisiana might prove entirely unsatisfactory to Georgia. Because yellow fever developed among Italians in New Orleans is no reason why there should be an attempt to bar Italians from the cotton fields of Arkansas or the mines of Tennessee, and because a shortsighted and limited group of individuals in Alabama have persuaded themselves that there is extreme timeliness and common sense in a lot of rant against immigration of foreigners to the South is no reason why governors of Southern States and commercial bodies should dignify that persuasion by calling a Southern conference on immigration and quarantine, no more so than that the South should pay any attention to a somewhat similar conference called at New York by that omnium gatherum styling itself the National Civic Federation."

With best wishes for the Nashville Board of Trade in all its efforts for the advancement of your progressive city, etc.

Preliminary manifestations this year were just as shifting and as absurd as those of earlier years, and though publicity was given to a majority of them in good faith, they bore the earmarks of a common origin. The first looming was way back in the dog days last summer, with Governor Glenn of North Carolina as the headpiece. It took this form:

Governor Glenn is the first executive of any Southern State whose views have been asked relative to this great meeting (the Southern Immigration and Quarantine Conference), as Governor Glenn is president of the Southern Industrial Parliament and the leading industrial Governor in the South. Governor Cox of Tennessee is soon to retire, and it is not thought that he will take the interest in the conference that he did last

year. He is president of it, and it is believed that if he will not accept the permanent chairmanship Governor Glenn will be elected to the head of the big movement. • • • It is probable that Governor Glenn will call the Southern Industrial Parliament to meet with the conference.

It must have stirred up some of the other Governors to note that Governor Glenn was being described as "the leading industrial Governor in the South," and presently Governor Cox of Tennessee was being pushed to the front as the suggester of the Conference last year, which is not so, and subsequently, at the eleventh hour, it was announced from Nashville that to Governor Heyward of South Carolina "is due the credit for the organization of the association," which also is not so, unless some pretty tall yarning was indulged in 12 months ago. Some day Governors of the Southern States are going to protest indignantly against being used as advertising mediums. The usual procedure was followed in connection with the Nashville meeting. In a letter inviting the President of the United States to be present cautious reference to them was made as follows:

This conference promises to be attended by all the governors with other State officers and leading business men from the entire South.

The conference always promises, but its achievements are usually largely promises and hot air. The promises about the Governors, including Governor Folk of Missouri, were maintained, with some changes, almost to the last ditch, to wit, November 5, when the manifestly absurd statement was given out from headquarters:

Governors of practically every State in the South will be on hand, a great many being on the program for important addresses.

The program, published at the same time, provided for addresses by 15 persons, of whom six were Governors out of 14 Governors in the Southern States, while of the total number of orators, eight were from Tennessee. One of the orators promised for the second day was Governor Vardaman of Mississippi. Of him it was announced from Nashville on November 8:

One address looked forward to with much interest is that of Governor Vardaman of Mississippi on "The Technical Education of the Negro." He has gathered new data to add to his recent utterances in the fight for the repeal of the Fifteenth Amendment, and promises (there it is again) to spring some sensational declarations.

That announcement scarcely squared with the statement from Jackson, Miss., that Governor Vardaman "would attend himself, but that other affairs that will be pending at the time will make it impossible for him to do so." Yet it may be expected that, to help along the next conference, it will be promised that Governor Vardaman will again thrill the multitude of delegates.

But other notables were to attend. The impression was created that Senator McCreary of Kentucky and Senator Simmons of North Carolina were to be present, for "they are known to be safe and conservative men, and their views given to the Nashville meeting will have great weight throughout the South."

Then "it is believed that Immigration Commissioner Robert Watchorn will attend," and by October 8 it was announced, without the use of many well-known names, that "the list of prominent men who will attend the great Southern conference in November continues steadily to grow and interest increases daily." Before that time it was "practically certain that at least three of the five Ambassadors to this country who have been invited will attend." Then came a bit of special ambassador-

ship to Washington for the ostensible purpose of again inviting President Roosevelt to be present, although it was generally known that the President had definitely planned his visit to Panama in the period when "the most important immigration convention ever held in the South" would be in session at Nashville. Coincidently it was stated:

Interest in the conference has been aroused all over the country, and the board is by no means undertaking to have the chief executive in attendance merely as a matter of form.

This special ambassadorial mission to the White House not only resulted in side-splitting developments, but gave a really new turn to the character of the Conference. At the outset it was said that "the immigration question would be the leading subject for the conference." Six weeks later it was discovered that "it is doubtful if the main subject which that conference has been called to consider—the one of immigration—is of equal importance even to the one of industrial education." Evident lack of enthusiasm and the ruction over the race riots at Atlanta were probably responsible for the suggestion, reported to have been made to the President of the United States by the special ambassador, to the effect that the solution of the race problem might be helped by putting to work on the Panama canal the idle negroes of the South, and the further reported statement:

President Roosevelt was very much interested in this and requested me to go over it more fully the next morning with Secretary Taft and Chairman Shantz, which I did, and these gentlemen told me that if a plan could be devised at the Nashville meeting that would have the endorsement of the South by which these classes could be legally sent to Panama, large numbers of them could be used to advantage.

In knowledge of White House customs we have naturally hesitated to discuss at length this remarkable proposition, but shall await with interest the deliverance on that subject by the "more than 2000 delegates" who did not attend the conference at Nashville.

In the meantime we request business men of Southern communities which may be hereafter selected as the victims of any kind of impromptu and wandering "Southern conference," with its facts in inverse proportion to its announcements of the flimsiest sort, to keep their wits about them and not to permit themselves to be led to misinterpret the motives of the MANUFACTURERS' RECORD when it opposes such annual exhibitions of tomfoolery—to use a mild word—as has been sketched in the preceding quotations.

These comments were written on the day of the assembling of the conference at Nashville, and we are sure that the men of affairs who attended it—for there were some on hand—will, after comparing the advance assertions about the participation in it on the part of nearly all the Southern Governors, ambassadorial representatives of foreign countries and the 2000 delegates "expected from every State in the South and from every commercial or industrial organization in every State" with the actual facts, understand why the MANUFACTURERS' RECORD, long acquainted with the methods of promotion of the undertaking, is moved and will continue to be moved to view with disfavor this "conference" idea, no matter what city may be selected as the scene of its anti-climax.

Members of the Nashville Board of Trade, who may not be aware of the real animus which would use their body in cultivating erroneous impressions about the MANUFACTURERS' RECORD, are re-

spectfully informed that in view of the fact that that spirituelle body known as the Conference for Education in the South has selected their city as the place for its next meeting, the MANUFACTURERS' RECORD fully expects adverse criticism of whatever comments it may make upon that conference, and fully expects that criticism to take the false position that the MANUFACTURERS' RECORD is hostile to Nashville.

The MANUFACTURERS' RECORD is actively interested, and has been for a quarter of a century, in the advancement of Nashville equally with that of Atlanta, or Birmingham, or San Antonio, or Charleston, or Chattanooga, or Little Rock, or Baltimore, or New Orleans or of any other place in the South. Its lifework is the upbuilding of every part of the South, every hamlet, every town and every city, and, as part of that work, it cannot fail to oppose, even though in doing so it may differ with some good friends and be liable to be misunderstood by them, every scheme foisted as "Southern" likely to discredit the South and to retard its best development.

OUR GROWING GULF TRUNK LINES.

Typically illustrative of how great railroad companies often attain their ends is the completion of the Trinity & Brazos Valley Railway from Mexia to Houston, Texas, which will give the Rock Island system and the St. Louis & San Francisco Railroad, as well as the Colorado Southern, an outlet to the Gulf of Mexico at Galveston. About four years ago the Rock Island, which did not then control the "Frisco," projected its own line from Dallas, Texas, to Galveston. A company was incorporated and a route surveyed, but the expense of building 300 or so of miles of line is not always undertaken in haste, and the plan halted. Then after awhile some gentlemen in Austin and Houston conceived the idea of building a railroad from Cleburne to Mexia, 79 miles, and it was promptly constructed. But within a year or two the availability of this property was so impressed upon Mr. B. F. Yoakum that a deal was made, resulting in its acquirement by the Rock Island, the Frisco and the Colorado Southern, in all of which he is interested. Houston was the objective point of the company from its beginning, but since Mr. Yoakum became concerned the construction of the extension from Mexia to Houston, twice as long as the original road, has been pushed with vigor. From Houston to Galveston trackage rights over the Santa Fe are enjoyed. Similar rights are also had between Cleburne and Fort Worth, connecting with the Colorado Southern and the Rock Island, while from Belt Junction, southeast of Mexia, a connection north to Waxahachie is being built, which, with trackage rights over the Missouri, Kansas & Texas, will take the line to Dallas for another connection with the Rock Island. This latter link will soon be done, and it is estimated that by January 1 the new route will be in full operation. When all is completed the Rock Island and other properties concerned will possess a short and excellently constructed line from Denver and other Western points to the Gulf.

Thus the Rock Island attains its object by reaching Texas' great tidewater port, but it is not yet wholly satisfied. The construction of the Colorado Southern, New Orleans & Pacific Railway, which is to be a through line from a connection with the Trinity & Brazos Valley Railway to New Orleans, is being

rapidly built and will give the system another outlet to a Gulf port. The system is also constructing a line of its own southward via Alexandria and Eunice, La., in a direct course to the Gulf coast of Louisiana. Gould and Harriman will hereafter not be the only Western railroad magnates controlling lines to both New Orleans and Galveston.

Moreover, the Santa Fe system, which has long enjoyed the facilities of Galveston as a port, is now engaged in building a cross-country line in the western part of Texas, a road which will finally connect the system so as to form a shorter route from the New Mexico and Colorado lines to the Gulf. It is also credited with having plans under way to enter New Orleans, and the Jasper & Eastern Railway, a lumber road which the Santa Fe is constructing, will, it is believed, prove to be the route for entering the Crescent City, either by an extension or by connecting up with some other projected road now apparently independently planned. The Missouri, Kansas & Texas is likewise feeling its way toward the Crescent City, but lately it has been intimated that these two roads, as well as the Kansas City Southern, would effect arrangements to enter New Orleans over William Edens' route, the line of the Louisiana Railway & Navigation Co., which is just receiving its finishing touches, and which was formerly known as the Shreveport & Red River Valley Railway.

This urgent demand for railroad extensions to ports on the Gulf coast emphasizes the importance of the traffic movement in that direction. But it need not be apprehended that because of this diversion of much freight, which had export facilities on the Gulf not been developed, would have found its way eastward over the trunk lines, that the latter are going to lose some of their great importance as common carriers. On the contrary, this change of direction in late years for part of the country's traffic means simply the creation of new trunk lines in another section, and the old ones still go on piling up their earnings year after year, as shown by their reports, and to the gratification of stockholders. As those trunk lines grew and prospered, so are we now seeing south of the Potomac other east and west trunk lines in their turn growing and prospering and carrying the coal, the iron, the lumber and the oil of the South, just as the older trunk lines convey those products of the North to market.

The development of the north and south trunk lines is not a factor to be feared in our country's progress. It means simply that an equitable development of natural resources is under way; that new regions are opening to industrial and commercial conquest, and that the future holds far more in store for all our trunk lines than either the present or the past.

PHILANTHROPIZED.

A humorist of the grimmest sort must have been the author of the alleged interview with Mrs. Russell Sage, announcing her purpose to give away to individuals whom she considers worthy the bulk of the fortune of about \$80,000,000 bequeathed to her by her husband. The announcement was enough to set professional philanthropy to licking its chops in ecstatic anticipation. For, if the purpose had been genuine it is very evident that professional philanthropy would ultimately have absorbed most of the \$70,000,000 remaining after Mrs. Sage had set aside \$10,000,000—cer-

tainly enough to provide a comfortable living for herself. She was represented as saying:

I mean to give to those individuals whom I think worthy. When I have left only enough to live comfortably perhaps I may not be annoyed by persons indelicate enough to beg for help as I am now. I wish to help men and women of the higher or lower walks of life who, through no fault of their own, are so unfortunate as to need assistance and are too proud to ask.

"Persons indelicate enough to beg for help" are numerous enough in this country to absorb within the short space of one week the whole of the \$70,000,000 if left alone to their inclinations and with the fortune within their range. Quite a large number of them, especially the authorities of representative educational institutions in the country, might be amazed at the suggestion that it is indelicate to beg for help. Under the spur of individuals who thrive upon the administration of the funds of philanthropy, thrive either in the enjoyment of salaries from the philanthropy or of the reputation, based upon the use of others' moneys, that they are philanthropists, the question of delicacy, decency or gentility, call it what one may, has become a steadily diminishing influence in higher educational circles, and the measure of the successful educator has become largely his ability to raise money for his institution from any source whatever and upon any condition, even that involving virtual control of his institution by the source of the graft. Some of the "unofficial statesmen," having still about them smouldering sparks of self-respect and self-reliance, might seek to justify or to minimize their beggary by calling its results "acceptance of assistance." But as a matter of fact that pleasant fiction would not make the beggary less beggary or the indelicacy less indelicacy. It would, however, bar the incautious mendicants of the country from participating in the spoils of a philanthropy limited to persons "so unfortunate as to need assistance and too proud to ask it." That limitation, too, would be the opportunity of the professional philanthropist. For it would be impossible for any one person to discover a sufficient number of unfortunates needing assistance and too self-respecting to ask for it to absorb in one's lifetime \$70,000,000. Indeed, a small army of individuals who make their living as social uplifters would be required to search out and authenticate worthy objects of the philanthropy. In recruiting this army, though, great care would be necessary to prevent the enlistment of individuals who might be inclined to advocate the cause of other individuals upon an understanding with the latter that they should pay a commission from the dole. Then, too, the army of professionals might so impress the philanthropist with the necessity for care, caution and leisure in investigating the claims of possible beneficiaries that the whole of the \$70,000,000 might easily be spent upon salaries for the army before any real relief could be given. Precedent for such a result is had in the approach of the expenses of "administration" to the expenditures upon relief in organized charities of various kinds.

So the safest course, perhaps, would be to entrust the handling of the vast fund to the salaried agents who have suddenly loomed as experts in philanthropy and education under the operation of the Carnegie-Rockefeller \$40,000,000 educational trust. Such an arrangement would probably appeal to them as giving them the chance to share in the general movement for a raise of wages, which has attracted attention

since the last election. They would undoubtedly be endorsed for the position by quite a number of Southern colleges, which, no longer under the necessity to proclaim that Barkis is willin', would technically not be barred, by any statute referring to the indelicacy of being unwilling to beg, from reinforced Oliver Twistism and from getting a whack at the \$70,000,000. The salaried agents deserting to the \$70,000,000 would not interfere with the working out of the \$40,000,000 educational trust. Their places could be quickly and easily filled.

SANITY AS TO THE NEGRO.

It is not surprising that the "race question" came to the front at the Southern "Conference on Immigration" at Nashville. The projection at the eleventh hour of the suggestion that national authorities were giving serious heed to the wild dream that the "Conference" might evolve some plan by which worthless negroes in this country could be made into worthy negroes in Panama, and by that means the "race problem" would be solved, was evidently based upon the knowledge that discussion of the race question may still be depended upon to draw a crowd where other attractions are lacking. But the wild project was given proper cataloging at the outset by Governor Heyward of South Carolina, who happened to be on hand. A dispatch from Nashville says:

In speaking of the plan to deport negroes he said the deportation could not be attempted unless it became a national, and not a Southern movement. Such a movement, he said, would not be attempted until the negro problem is better understood and more acute at the North than it is now.

"In the course of time," he continued, "the negro, who is now rapidly increasing in certain cities of the North, may, by his failure to meet the expectations of the people of the North and his own consequent responsibility, become such a hindrance and menace that our Northern friends will be ready to do something more than simply give advice to the South."

By that time the Panama canal will probably be completed and the negroes will have become so scattered throughout the country that, as far as they are concerned, the race problem will have been solved.

COKING COAL FOR WHEELING.

At the last meeting of the stockholders of the Board of Trade of Wheeling, W. Va., it was determined, at the suggestion of Dr. I. C. White, State Geologist, that \$2500 be raised to pay for making a diamond drill test in the Wheeling section of the State for coking coal. According to the *Wheeling Register*, Dr. White referred to a 200-acre tract of land near Glenova, and suggested that the test be made there, and he showed that if coking coal could be found at a depth of 600 or 700 feet under Wheeling and its vicinity there would be no necessity to pay railroad profits in bringing coke from the Connellsville district. Dr. White discussed wastes in the State's fuel resources, and he claimed that 5,000,000 feet of gas, equal in power to 500,000 bushels of coal, were daily going to waste in the State, largely because of the practices of lampblack factories and the failure of companies abandoning oil pools to plug the gas or to pipe it to some point where it could be used for fuel.

THE COTTON MOVEMENT.

In his report for November 9 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 70 days of the present season was 4,099,031 bales, an increase over the same period last year of 135,444 bales; the exports were 1,938,005 bales, an increase of 187,117 bales; the

takings were by Northern spinners 443,252 bales, a decrease of 58,378; by Southern spinners 553,315 bales, an increase of 6576 bales.

COLUMBUS' WATER-POWER.

A Force in the City's Industrial Progress.

[Special Cor. Manufacturers' Record.]

Columbus, Ga., November 6.

Columbus, Ga., ranks high in cotton manufacturing, and has been making cotton and woolen cloths for half a century. It has doubled its population during the past decade, and now has about 20,000 inhabitants. It occupies an excellent location on Chattahoochee river, which is navigable to large steamers for at least 400 miles from Columbus to the Gulf of Mexico. The climate is equable, and the surrounding country well adapted to agricultural pursuits. It has one of the finest water-powers in the country, which is utilized to furnish power for the street railways, electric lights and the running of extensive factories, cotton and woolen mills. Numerous important factories are located here. The F. H. Lumus' Sons Company, manufacturers of the Lumus combination cotton gins, presses, suction elevators, and other ginning machinery, is one of the successful manufacturing concerns of this place. It began in an humble way some few years ago, but has steadily increased and developed its plant until at the present time it has more than quadrupled the original plant. Its product

it is shipping all over the Southern country, and the universal opinion is that it cannot be excelled. Located here is also the largest plow works in the South and the immense plant of the Columbus Iron Works Co., which occupies several acres. Both of these concerns are owned and operated by the Columbus Iron Works Co. This company was established in 1853 and incorporated in 1856, and has been most successful. It manufactures a reliable absorption ice machine, which it is shipping all over the United States. To show its popularity many orders are duplicated for machines of larger capacity. It reports business as very encouraging, having orders on hand to run it for some time.

Messrs. T. W. Smith & Co., architects, are another busy and popular firm who have several important contracts on hand and negotiating for others. The Columbus Showcase Co. is erecting its new plant, which will occupy about seven and one-half acres. The buildings will be as follows: One 200x60 feet, three stories; one 250x60 feet, three stories; one 75x60 feet, one story; a warehouse, dry-kilns, and in contemplation two additional buildings larger than these mentioned. The buildings will be of concrete-block construction and general fireproof material, and will have individual electric drive. The present installation will be 200 horse-power, the contracts having just been let with the Columbus Power Co.

This place is destined to become one of the great industrial cities of the South. Sites for factories can be found here and new industries are in every way encouraged, which shows the enterprise of the city and the substantial invitation it extends to investors. Columbus is celebrated for its healthfulness. There has never been an epidemic in the city, and the average death-rate is but 12 out of 1000. Its school system is excellent. Modern schoolhouses, with all sanitary arrangements complete, are provided for pupils of every class. There are also a number of private schools, besides a college for women, a business college and a fine public library. The growth of Columbus has been strong and wholesome, and it is to be included in any list which may be made of the prosperous cities of the South. Material evi-

dences of the new Columbus are manifest, and it will not be long before it will have more manufacturers. An evidence of this is the way that Mr. G. K. Hutchins of the Columbus Power Co. and Mr. Ralston Cargill, president of the Board of Trade, are using every endeavor to bring prominently before the outside world the just claims of Columbus as a manufacturing center. Those who may desire to change their location would do well to write these gentlemen for more definite information regarding the inducements which are offered to manufacturers. The Columbus Power Co. can supply the needs of many enterprises, as it is now developing its plant to the point where it can supply 75,000 electrical horse-power, which it offers at a very reasonable rate.

I. S. FIELD.

The Little River Power Co.

Reports to the MANUFACTURERS' RECORD of new enterprises projected in the South during the week included the Little River Power Co. This company has been incorporated for the purpose of building a dam to develop water-power and establishing an electric plant to transmit the power by electricity to Gadsden, Fort Payne, Anniston and other cities and towns in Alabama and in Georgia. The power will be developed on the Little river. The incorporators of the company are Messrs. O. R. Goldman and F. W. Mitchell of Gadsden, R. A. Mitchell of Alabama City, Ala.; H. W. Sexton of Anniston, Ala., and H. T. Henderson of Durango, Col. The company's authorized capital stock is \$100,000, but it is stated that an actual expenditure of \$1,500,000 is contemplated.

The MANUFACTURERS' RECORD is advised that the company will develop about 20,000 horse-power, and expects to begin construction work soon. The dam will be planned to hold a forebay nine miles long, the lake to be about 35 miles round. Mr. R. A. Mitchell is president of the company, Mr. Henderson vice-president and Mr. Goldman secretary-treasurer.

Concrete Gravel.

Editor Manufacturers' Record:

In the country around Waco may be found a gravel which, on being placed on a roadbed and left to the travel of wagons, will pack down hard and firm like a conglomerate rock, only stronger. There is no material from which roads can be built of more durable qualities. The more it is used the better the road gets. The hoofs of animals and the wheels of wagons and other vehicles grind the surface of the road to powder, but this road dust settles into the surface and makes it more solid. In this county this gravel is inexhaustible. Perhaps if you were to build a road around the world it would take it all. We have not sufficiently utilized gravel. We have some roads capped with it. Our land is black waxy, roads almost impassable in winter. Our commissioners are discussing the advisability of a general road movement, as the need of better roads and the material are so close together.

ANDREW GODDARD.

Waco, Texas.

Wants Best Paving Materials.

Among the numerous ways in which Southern cities are showing their progressiveness is in providing modern street paving. This is seen in an announcement that the city of Columbia, S. C., has about decided to expend approximately \$100,000 for modern street paving, and the MANUFACTURERS' RECORD is advised that suggestions are invited as to the best materials to be used. Correspondence can be addressed to R. C. Keenan, chairman of street committee.

CONCRETE AND CONCRETE WORK—II.

By ERNEST McCULLOUGH, Mem. West. Soc. Eng., Consulting Civil Engineer, Chicago.

Before any material breaks it stretches or compresses to a certain degree. Steel can be stretched and will return to its original length any number of times, provided it is not stretched beyond the elastic limit. This is the point where it receives a permanent deformation, and it takes less pull after that to stretch it. The elastic limit is about six-tenths of the ultimate strength.

When the steel and concrete are put together in a beam the beam theoretically should not break until the steel breaks, because the steel and concrete are properly proportioned. As a matter of fact, however, after the steel is stretched beyond the elastic limit it stretches so rapidly that too much strain is put on the concrete and it crushes at the top of the beam long before the steel breaks. Therefore the strength of the beam does not depend upon the ultimate strength of the steel, but upon its elastic limit as compared with the ultimate strength of the concrete.

It is a well-known fact that the working of steel raises the elastic limit until it is more than six-tenths the ultimate strength. In using twisted bars Mr. Ransome had to get a uniform steel and the twisting raised the elastic limit so that the bars when in the concrete beam strengthened it more than the calculations led one to believe was correct. In other words, all beams reinforced with Ransome twisted rods developed greater strength under tests than one would expect from the calculations when the beams were designed.

The patents have expired, and today a number of firms are making twisted steel bars for reinforcing. It was thus shown that steel having a high elastic limit is better than steel with a low elastic limit. At least less of the former will do, which spells economy. In some of Hyatt's experiments it is possible some steel with high elastic limit was used and he gave all the credit to the roughnesses and projections on the bars. The twisted bars were used at first to get around the Hyatt patents and secure the grip deemed so necessary, and instead of the grip giving all the strength, it was found that the twisting gave some.

German and French engineers went on from where Mr. Hyatt stopped and developed reinforced concrete to an amazing extent, while in the United States its use was practically limited to floors and sidewalks and confined to two firms, one on the Pacific coast and one on the Atlantic. European engineers studied the material scientifically and mathematically and used plain smooth bars. They found the exact value of the adhesion between cement and steel aside from the mechanical bond caused by roughness. They designed their structures scientifically by assigning values to all functions, such as tension, compression, shear and adhesion.

Thus in Europe we find the engineers using smooth bars of medium steel placed in mortar for protection, while in the United States the smooth bars were deemed insufficient and deformed rods necessary. The mortar of the Europeans was deemed a refinement and the rods in America were placed in the concrete, but at the bottom of the beam the stone was usually smaller than in the upper part.

Coincident with the expiration of the Hyatt, Jackson and Ransome patents a concrete mania struck the United States. The boldest work of the European engineers has been surpassed by American engineers and the experiments made in our technical schools surpass the European experiments in numbers, thoroughness and real value.

The European engineers have been par-

tial to reinforced concrete with medium steel rods and bars. Mechanical anchors in addition to the grip of the concrete on the steel has not been thought necessary. American engineers, on the contrary, have considered corrugations and twists in bars to be a decided advantage. The reason for this is that the strength of steel depends greatly upon the amount of carbon. A medium steel contains a small percentage of carbon and is readily bent without breaking. The elastic limit is low. A high-carbon steel has a greater ultimate strength, with a high elastic limit, but is more readily broken by shock than medium steel.

In the experiments most widely quoted and considered most reliable the high-carbon steel has shown an apparent superiority over medium steel. As nearly all the patented bars in the market are made of high-carbon steel, they are deformed or corrugated in order that the full strength of the bar may be used without destroying the adhesion. The higher elastic limit permits the use of a rod with a smaller cross-section than where the rod is made of medium steel. Unless an engineer intends at the outset to use a high-carbon steel in his concrete when designing a building, it is usual to design as though medium steel were to be used.

The writer in his work uses plain bars of medium steel with a safe fiber stress of from 10,000 to 12,500 pounds per square inch of cross-section. After designing his beams, etc., he computes the comparative amounts of the different kinds of bars necessary and gets figures on all. He then selects the bar that gives the required strength at the lowest cost. This varies, and he cannot tell in advance which bar he will use. Plain bars can generally be purchased in the market. Special bars are not so readily obtained.

It has been already stated that Hyatt first thought it proper to put in vertical or diagonal ties to hold the top and bottom of the beams together. This seemed to him a reasonable idea, and his surprise was great when the experiments showed it was apparently a mistake. For years no reinforcement of that kind was deemed necessary, and all the earlier work was done without any reinforcement other than the longitudinal rods in the bottom.

Numbers of experiments have shown unmistakably that internal stresses are set up in all beams, and some reinforcement of the web is necessary. It is the exception today when beams are designed without web reinforcement or stirrups. Why Hyatt concluded such reinforcement unnecessary is hard to understand, except that he believed appearance was of little moment. Some cracks appear in work not reinforced in the web, but they are not always dangerous.

A short deep beam must have web reinforcement. One of the first of American engineers to call attention to the advantages of vertical and diagonal ties was Mr. Kahn, and in time all concrete engineers came to nearly his point of view. Ransome, however, as well as a number of European engineers, used stirrups for years before engineers generally took it up.

All bars should be turned up at the ends for anchorage. It is now customary to bend up a certain number of bars toward the top of the beam after they have passed the place in the bottom where they are needed for strength against bending. In addition to this, many engineers place vertical stirrups at frequent intervals. Sometimes they are fastened to the bottom bars, and again they are not fastened.

The lines of stress in a beam are ellip-

tical in shape. At the ends of the beams they go up at an angle of practically 45 degrees, but near the middle of the span they are nearly horizontal. When the web reinforcement near the ends is at an angle and near the middle is vertical it seems admirably calculated to resist the opposing forces. When the vertical bars are not fastened to the bottom bars there can be no confusion of stresses. On this point, however, engineers and experimenters differ, and no one really knows. This particular point is of comparatively little importance.

Mr. Kahn makes a bar having wings that are bent up. He claims that the wings act as members of a truss in the concrete. All tensile stresses are carried by the steel, and the compressive stresses go through the concrete along the shortest line to the steel framework. He claims that the definite attachment of the web reinforcement to the bottom bars is of great importance.

What difference does it make? If any one of these materials, systems or methods will produce structures that are safe it is all we need. If the cost is no greater with one than with another, then the man who pays the bills should be satisfied.

The thrashing out of all the little points in reinforced concrete design has been of wonderful mental benefit to engineers, and with pleasant. The discussion is not ended, and will not be for years. It has been a fruitful field for patentees, and Uncle Sam in his patent-office methods is one of the worst bunco men that ever struck the earth. He gives a patent for anything reasonable or unreasonable, and in many cases retards development. It is well known that a patent is valueless until tested in the courts, yet the possession of patent papers is an excuse too often for blackmail.

There are a number of patented bars and systems for reinforced concrete in the market that strongly resemble each other. 'Tis the difference between tweedle-dee and tweedle-dum. They are all extensively advertised, and all seem to do well. So far as the writer has observed, they are all good, but some seem to be faddish.

The owner can pretty safely permit price to regulate the matter if he has a competent man to make his plans. A good development lately is the shipping of reinforcement set up for placing bodily in the beams. This obviates mistakes of careless or ignorant workmen.

Road Improvements to Cost \$250,000.

Reference has been made frequently and sometimes at length by the MANUFACTURERS' RECORD to the progress of the good-roads movement in the South. Last week Montgomery county, Alabama, held an election at which a vote was taken at Montgomery on an issuance of \$250,000 of bonds for road improvements. The vote was affirmative. It provides for extending present roads and building new ones.

Needs a Gas Plant.

In the course of a letter to the MANUFACTURERS' RECORD George D. Case of Milledgeville, Ga., speaks of that city's need for a gas plant. Mr. Case says: "I wish some gas people would come to this place and feel of our town with a view to putting up a plant here." This should be an opportunity for some capitalists or investors interested in the operation of gas plants in the South.

Major Edgar Jadwin, United States engineer in charge of the Galveston district, will, it is reported, recommend the improvement of the section between Plaquemine, La., to the western limits of Grand Lake, of what is known as the first section of the intercoastal canal to connect the Mississippi and the Rio Grande.

INDUSTRIAL ADVANTAGES OF LEXINGTON, KY.

[Special Correspondence Manufacturers' Record.]

Lexington, Ky., November 12.

Lexington wants factories. This is a fact noteworthy in a record of the strivings the South is making for industrial development, and it is of further significance because this particular section of the South has been for a century and more pursuing a pleasant, profitable and popular course along such entirely different lines that there are no factories here of any kind save woodworking in a preliminary kind of way. Indeed, Lexington was more of a manufacturing center 100 years ago than it is today, for what of the latter-day energy has not been expended in the line of politics has been largely devoted to agriculture and the horse.

It is all the more creditable to the present conditions of the Lexington people to do something industrially that the temptation along other lines have been so great and still are. Here is the natural home of the thoroughbred, and fine horses are so indigenous to this soil that scarcely the smallest farmer or widow of a farmer in all this section neglects to raise a colt or two, any one of which is liable to bring a price that means affluence for years to come. It is a region of fine estates, and there is comfort and delight in pastoral pursuits that have given a tinge to the very conception of Kentucky in the mind of the world. Around here are the famous stock farms of a Hagggin, a Keene, a Harkness and many another noted breeder of horseflesh, and here are seen at the annual sales and star turf events some of the most fashionable and distinguished gatherings to be found in all America. Here there is a very aristocracy of the soil, a landed gentry, the like of which is hardly to be found outside old England's bounds. What wonder, then, that the drudgery and the hard grind, the ceaseless toil and the frequent small profits that are inseparable from industrial undertakings have made slight appeal to the people of this garden spot of Kentucky's bluegrass section!

Wealth there is here in abundance. The banks in this charming city of some 40,000 people have individual deposits of more than \$5,000,000 subject to check. But those who have money to invest would rather put their wealth in bank stocks, mortgages and bonds than in manufacturing enterprises. They have not been educated yet to the vast communal advantage of building up an industrial center. This is a work the Lexington Chamber of Commerce is attempting to do.

This organization is composed of 150 of the most progressive business men of Lexington, and it is devoting its energies to the industrial upbuilding of the city. Conditions warrant the assumption that a marked development may be brought about in this line. Lexington is a railroad center already. The L. & M., the Queen & Crescent, the C. & O., the Southern and the Lexington & Eastern all have lines into this city, so that unusual transportation facilities are afforded. Lexington is a hardwood market of the first class. From as far away as 100 miles the finest oak logs are shipped in. With a freight rate of eight cents a 100 to Lexington, as against 25 cents to Grand Rapids, it is yet nevertheless true that there are no furniture factories of any kind in Lexington, while sawed timber is shipped through Lexington to Grand Rapids, to Eastern factories, and is even exported. There are five or six planing mills here, and house-building materials are manufactured, the list including everything that goes into the construction of a house; but there is no establishment here making a greater

refinement of product. Nothing has ever been attempted here in the way of furniture manufacturing, although conditions suggest the profitable manufacture of many lines, such as furniture in general, mantels, refrigerators, etc.

It is declared that there would be no difficulty in getting an abundant supply of the best kind of hands for factory purposes. In addition to those on the ground, it is stated that the mountain people could be relied on to come in when conditions are promising. The mountains are only 50 miles away, and the mountaineers make workmen of a high grade of intelligence. With the establishment of any line of industry there soon comes to be a population of skilled workmen who develop an aptitude for general industrial pursuits of varied kinds, and out of their ranks most frequently come the men who lay the foundations for the great industrial enterprises of the country. Every condition is favorable here for a variety of woodworking plants. With a number of these successfully established opportunity and occasion would appear for other enterprises, and thus the beginnings of a large industrial development would occur.

Lexington has been prosperous and contented for so many generations that it is hard to throw off the old spirit and take on a new; but under the leadership of a number of determined and active citizens a start has already been made. Lexington is not sleepy; on the contrary, it is a very bright and snappy city, and in recent years has been growing and improving in a notable way. Only in industrial lines has there been hesitancy and indifference. In municipal matters and public enterprises Lexington might almost be adopted as a model by other cities of the South. There are many miles of well-paved streets; \$100,000 is now being spent in the perfection of a sewerage system devised some years ago by the late Colonel Waring; under statute the City Council is required to make annual appropriations for a park system, with which a start has been made in a tract of 18 acres, the plans of the system being worked out by a park board along lines laid out by the Olmsteads of Brookline, Mass.; the city has built a \$30,000 auditorium with seating capacity of 2500 for conventions, and the public buildings, the modern office buildings and the newly-constructed business houses are conspicuously creditable. The homes and the residence streets of Lexington have a distinctive charm; the equipages one sees are in harmony with the traditions of the Bluegrass State, and the people one meets have the fiber and the bearing one would expect to find in this ancient seat of the Breckinridges and the Clays.

The most distinguished, distinctive and individualistic city of Kentucky outside of Louisville, and the metropolis of the bluegrass section, Lexington is attracting an ever-increasing population from the outside. The records in the building line tell this story completely, for during 1906 there will have been erected about 500 new residences here. Three principal causes seem responsible for this growth—the migration of landowners who have sold their holdings to the accumulators of large estates and who come here for school advantages for their children; because the interurban trolley lines have made this a greater shopping and social center than ever before, and for the reason that an important development has occurred in tobacco raising and handling which seems destined to make this a tobacco center of an important sort.

Lexington has long been famous for its

schools and colleges. Besides three female seminaries of note, numerous private and preparatory schools and the public schools, the Kentucky State College is an institution which in itself would give fame as an educational center to any community in which it alone might be located. It is declared that all the industrial establishments in the country have bids in for the students in the mechanical engineering department of this college, and that the young men who graduate here have contracts in their pockets when they leave school. No wonder the plan is heard at State development conventions that with such a wealth of trained young men the State is losing a tremendous opportunity when it fails to provide occupation for these graduates within its own borders.

The effect on Lexington's future that will be caused by the great development of the interurban trolley system of this section cannot be fully grasped or accurately defined just now. Already, however, this development must be credited with not only a part of the increased population of the city, but with the awakening spirit of public enterprise that is apparent. There are in operation now lines to Versailles, Georgetown and Paris, 42 miles of line in all, and there is contemplated a line to Winchester, 18 miles, and to Richmond, 26. The line to Versailles is being extended on to Frankfort. The Louisville interurban company is headed toward Shelbyville, and when Shelbyville and Frankfort are reached it is considered certain that one of the two companies will fill in the gap. This would make Lexington the central radiating point of the most important interurban trolley system in the South, and it would serve as rich and populous a section as almost any system in the country. The system is amply backed by a company of which J. Levering Jones of Philadelphia is president, and Philadelphia capitalists are the principal owners.

The growth in the tobacco business has been caused by the vast increase in the acreage of tobacco in all the white burley section, but particularly in Fayette county, where much land never before cultivated has been broken and put in tobacco, and where the increase has been from 4,000,000 pounds five years ago to 8,000,000 today.

From one warehouse, which occupied the position of leaf department for various outside factories, the number is being increased to five. Two will be loose sale houses, one a handling house and another a warehouse and stemmer. One of the loose sale houses is being built by Stivers & Hawkins of Lexington, and the other by Silas Shelburn & Son of Richmond, Va. In the basement of the latter the great R. J. Reynolds Tobacco Co. of Winston-Salem, N. C., will put a prizewinner. The handling house is being established by A. S. Herndon of Richmond, Va. The interest outsiders are taking in the situation here is one of the most significant features of the development, and it is expected that other very important moves in that direction will be made. Some other Richmond parties are negotiating for an opening, and a strong effort will be made by the Chamber of Commerce to get a big factory here.

Indicative of the enterprise of the Chamber of Commerce, and demonstrating the creation of a helpful public spirit, the work in connection with the location of the stemmer is of importance. By an arrangement amounting to the practical donation of a considerable sum the Porter Warehouse Co. was financed through Chamber of Commerce efforts and a building provided, \$5x158 feet in dimensions, into which W. L. Petty, a well-known tobacco man of Rocky Mount, N. C., will install \$10,000 worth of machinery for a stemmer by January 1. Later on he will

move into a larger building. The Porter Warehouse Co. is named for the president of the Chamber of Commerce, Prof. J. W. Porter, a bank president and very public-spirited man, unceasing in his efforts in behalf of industrial Lexington, and an inspiration to the whole Chamber of Commerce movement.

Lexington is headquarters, too, for the timber operators on the line of the Lexington & Eastern Railroad, and for the oil and gas men who are operating in central Kentucky, and it is the biggest hemp market in the world—all of which are elements to be considered in the growth, importance and possibilities of the place. The Lexington & Eastern, a line in operation between Lexington and Jackson, 94 miles, practically owned by J. Kennedy Todd of New York, is to be extended 20 miles, it is reported, into the best coal fields of Eastern Kentucky, from which Lexington expects to derive added benefits in the way of reduced coal prices.

Just what industrial advantages will result from the introduction of natural gas into Lexington has not yet been determined. At the head of the Natural Gas Company is Joseph Seep of Oil City, purchasing agent of the Standard Oil Co., and Standard Oil people are accredited with the ownership of the company. They took over the property of the Lexington Gas Co. As this was one of the first gas companies established west of the Allegheny mountains, a good deal of overhauling was required. The mains were not in condition to stand a heavy pressure, so that the old mains are being replaced. The company owns lenses in Menefee county, 45 miles east of Lexington, where gas is struck at an average of 1250 feet, and where the wells have a flow of 700,000 to 800,000 feet daily. It is the belief that the field is a great one, but it will be thoroughly tested before a final conclusion is reached. If it should so prove to be, the hope is entertained that gas may be had at rates that would prove attractive to manufacturers. As it is proposed to supply only the cities of Mt. Sterling, Winchester and Lexington, a long life to the field is anticipated.

In the line of hemp conditions seem to be more interesting and unique than significant of possible developments. As in flax and linen, there has been no progress in extending the hemp industry in this country for all of 75 years, and differences between conditions here and in the Old Country as to cost of raising these fibers and in ease and cost of treating them, together with the increased uses of cotton and the introduction of other fibers, as well as other conditions, seem to indicate a decline rather than an extension of hemp growing and manufacture, along with that of flax and linen, in America at least. Within a radius of 50 miles, confined practically to the single bed of limestone called the Lexington outcrop, an average of 8,000,000 tons of hemp is annually raised, which is 90 per cent. of all the hemp grown in the United States. Lexington is the principal market for the crop of the section. Formerly bagging and rope were made here, but now the product is all shipped East in the form of rough-dressed and double-dressed hemp and tow. Formerly all standing rigging used to be made of American hemp. The decline of sailing vessels would have affected this demand had the use still continued, but instead of hemp steel has now come into general use. Formerly hemp was used for binder twine, but sisal and manila are now used instead, and hemp rope has been largely supplanted by jute. In many lines it seems hemp cannot stand competition with cheaper fibers. So with greater inducements to the farmer in the way of tobacco and other crops the hemp acreage is decreasing and the picturesque fields and stacks of Kentucky hemp may be counted rather a waning

glory than a promise of greater development to come.

Lexington ought to be more of a flourishing center than at present. There are 600,000 bushels of wheat raised in a year in Fayette county, and yet more flour is shipped in than ground.

While cheap factory sites in acre tracts are not available in and around Lexington as in many other places, for the reason that any kind of bluegrass farming land brings more than \$100 an acre and adjacent to this city lands sell at from \$200 to \$500, yet the Chamber of Commerce will undertake to aid in any way they can in getting suitable sites for desirable factories on terms as favorable as possible.

It may be pointed out that with the exception of groceries, and a dry goods house now being established, there are no wholesale or jobbing houses in Lexington, and it is declared the openings for such establishments are very attractive.

As in practically every city in the South, the exceptions being few and far between, Lexington needs more hotel accommodations and better. With every man in the business grown rich during the past 10 years, it is really astonishing that there hasn't been a greater hotel development the country over. Lexington's defect will be materially remedied when the contemplated eight-story extension to the famous old Phoenix is completed.

Lexington is as old as the republic, having started in 1776. Until last August the city limits had not been extended for 100 years. The work now being done by a few stirring spirits indicates that a new era is on, and it is not too much to expect that before long Lexington will become known as a center of business and industrial enterprise, while still retaining her well-bestowed name of "Belle of the Bluegrass State."

ALBERT PHENIS.

DEVELOPMENTS AT AUGUSTA.

Factors in Its Industrial and Commercial Growth.

[Special Cor. Manufacturers' Record]
Augusta, Ga., November 8.

Augusta is a great cotton center, and with the receipts about 60,000 bales under the receipts for the same time last year it would seem that there might be a depression in trade circles. However, this is not true, and the development of the city and surrounding territory was never being pushed as it is being pushed now. The Chamber of Commerce has already done a great work for the city, though the organization is now only a year old. The Georgia-Carolina agricultural fair, which was held at Augusta October 29 to November 3, was most successful financially, and a project is on foot to increase the capital stock to \$50,000. If that is done it will make the annual fair one of the greatest of the country. The territory officially known as the Augusta cotton district comprises some of the finest farming regions in the South, and there has been but little development made so far, though it is one of the oldest-settled sections of the Southern States. The farmers and business men are united in their efforts for the fair, and recognize in it one of the cheapest and best educational institutions that could be perpetuated for the general advancement of education in agricultural pursuits. It will bring city people and country folk in closer touch, and this is what is needed in the South.

Another work that the Chamber of Commerce is pushing along this line is the establishment of the agricultural college for the tenth Georgia congressional district in Richmond county. At the recent preliminary meeting of the board of trustees for the tenth district, over which Governor [redacted] presided, there was but little real

as submitted by President Phinizy of the Chamber of Commerce. Hancock county did well in the matter, considering its resources, as it offered 200 acres of land and \$10,000 cash, but Richmond county bid 300 acres of land and \$17,000 cash. The decision will be rendered in a final meeting which will take place November 26 in Augusta, and at that time it is expected that Richmond county will raise its bid to \$25,000 in cash, with the same amount of land. All the business men and farmers declare the agricultural college for the tenth district would be an institution of permanent value to the county and city.

The establishment of various manufacturing plants is one of the surest signs of development that can be given, and almost continually something of this character is coming towards Augusta. There is already a small shoe factory here, where goods are made by hand, employing high-priced labor. The establishment of a cotton-bagging factory with a capacity of 2500 yards daily, using cotton for the basis of its bagging, is one of the recent good things that has been established here. A starch factory with headquarters in Philadelphia is now considering the establishment of a plant in Augusta, and the Chamber of Commerce has just forwarded it the information it desires. If it comes it may enter into contracts with a lot of farmers to grow sweet potatoes for it, though it is expected that the demand here will be so great that the farmers can sell them at higher prices than the factory can pay. Any way, the firm proposes to use corn chiefly, and it will operate on corn exclusively if no potatoes can be secured.

One of the greatest manufacturing concerns that has ever contemplated coming South has just entered into a correspondence with the Chamber of Commerce, and may locate here. It has \$4,000,000 capital to start with, and will manufacture car wheels and car supplies, and every effort will be made to bring it to the city. A prominent city official told me a day or so ago that the city needed enterprises of this kind, and that there was at present a sufficiency of cotton mills. The operatives of iron and steel plants generally receive high wages and take great interest in building up a city, buying their own homes and improving them. Nearly all industries pay higher prices for labor than cotton mills, and whatever other industries are brought here will be of a high class.

City Engineer Nisbet Wingfield says he expects to see the great water-power at Anthony Shoals, on the Savannah river above Augusta, developed soon, and when it is done the city will get many other plants of great worth. The power will be turned into electricity and conveyed to whatever points it may be needed. Already the Georgia vitrified brick and clay factory at Campania, 22 miles above the city, is thinking of using the powers in the event they are developed. Little towns in the whole territory will use it for lighting purposes, and trolley lines in the country will be established in many localities connecting important points.

The establishment of the Augusta Hardware Co., which is an exclusively wholesale firm, is the first ever established here, and it is doing an immense business, though it is scarcely a month old. Wholesale shoe and dry goods houses are needed additions to the city's business interests, as there is only one wholesale shoe house here and practically no exclusive wholesale dry goods house. With the establishment of such concerns a greater volume of business in many lines could be brought to Augusta. The freight rates are low, and there is no reason why it should not be made a great trade center, as it is now the second greatest inland cotton market.

The development of the inland water-

importance, as the Savannah river offers inducements commensurate with those of any other section for the development of river facilities. Two large river boats ply constantly between here and Savannah and are doing a big business. Preparations are on foot for the enlargement of the river traffic, and after the first of next year another boat will be put in service. The Chamber of Commerce will probably ask Congress to make adequate provisions for taking care of the river, and whatever improvements needed will be urged. This is a source of much good to the city, as it insures good rates and gives prompt service along the line of the river where railroads do not reach in many cases. The railroad facilities are improving, and Augusta will feel the effects of such work in a splendid way.

The Augusta Southern, which has been in poor shape for many years, is being straightened out and the roadbed made good. This will be an improvement of much value, as it traverses a territory which is unrivaled in its resources. The building of the Augusta & Florida Railroad is gradually being carried through and the connecting links are being joined as rapidly as possible. This will make a direct line to South Georgia and Florida points, opening up a great territory, the bulk of whose trade will come to Augusta, as this city is the best market that will be accessible to the points reached. The various roads centering here are considering the advisability of improving their passenger-train service, and in local railroad circles it is freely predicted that the Georgia Railroad will begin the operation of a special passenger and fast mail train between here and Atlanta about the first of next year. The Southern road will begin the operation of the Southern Palm Limited during the first week in January, and it will give excellent service between here and New York. The tourist season will open at that time, and greater crowds than ever are expected to visit Augusta and spend the winter.

The improvements of the public roads throughout the Augusta territory is one of the best works that is being carried on now by the public officials. All roads are being paved with gravel and macadamized, so as to facilitate travel in the rural districts. The establishment of a 15-mile boulevard encircling the city is now under way, and will be a great attraction in many ways. The property along the way is advancing in prices, and farms will be in great demand when it is finished. The engineers state that it will be one of the finest pikes of the United States, and it will go through a great diversity of scenery. The sand hills will be circled and then the lowlands will be gone over. Oil will doubtless be used on the sections where it is sandy and dusty, and where the soil is inclined to be damp it will be raised and graveled. This will make the boulevard the same the year around.

The labor condition is the greatest drawback that now confronts Augusta, and it is a problem that is hard to handle. For some months the cotton compresses and railroads have been tied up with the cotton business, and if the additional 60,000 bales which came in last year to this date had been received this year it is impossible to say what might have been the result. As it is the compress companies are a month behind with their work and the railroads have been obliged to dump cotton in the most convenient places so as to get cars to move the crop. In front of the union depot cotton has been piled high for weeks, and farmers have lost a lot of money through the delay in handling, owing to the decline in prices since the cotton was delivered to the railroads. Much of the cotton has been tied up for three weeks or a month. Just how such conditions are to

say. Efforts at immigration are being made, and recently an expert from the bureau of immigration of the national Department of Commerce and Labor visited the city and held a conference with cotton-mill presidents and also investigated the needs of farmers in this section, but no definite action has yet been taken on the matter. Secretary Moore of the Chamber of Commerce attended the recent meeting of the immigration society at Savannah, and some action will be taken by the Chamber of Commerce to bring the immigrants toward Augusta.

Trade prospects were never brighter, despite seeming adverse conditions. But few complaints are heard from any sources, though it would appear that much less trade would be coming into the city in view of the fact that the cotton receipts are so much smaller than last year. However, the stock in the city is hardly half of what it was at this time last year, and this accounts for a portion of the pick up in trade. Another thing that is regarded as favorable to the increase in trade is the diversified and intensive farming interests of the city. Big grain, hay and dairy farms, together with a few nice sized truck and fruit farms, add greatly to the revenue of a farming section, and as the city trade is largely from this source, the decrease in trade in any line has been small, while in others it has grown considerably. The small towns in the adjoining territory are doing a thriving business, building new banks, warehouses, substantial dwellings, stores, improving farms, building new barns and outbuildings, all of which adds to the real wealth of the city of Augusta and finally must turn a great volume of trade in this direction. Business men realize this, and they are giving every encouragement to projects of this kind.

The officers of the Chamber of Commerce chosen for this year are Messrs. J. T. Bothwell, president; E. F. Verdery and P. H. Rice, vice-presidents; Maurice Walton, treasurer, and W. J. Moore, secretary.

J. C. McAULIFFE.

STEEL PASSENGER CARS.

600 to Be Built Next Year for the Pennsylvania Railroad Co.

According to a press dispatch from Philadelphia, 600 steel passenger cars for the Pennsylvania Railroad Co. will be built next year. Space for 550 cars has been reserved with the American Car & Foundry Co., while the other 50 cars or more will be built at the Altoona shops of the railroad company. These orders, it is said, will include baggage, express and mail cars, as well as passenger coaches.

The Pullman Company is also reported to be building a number of steel sleeping cars.

During the past fiscal year 1198 industries were established in the territory served by the Southern Railway and the Mobile & Ohio Railroad. They included 377 lumber and woodworking establishments, 100 mineral plants, 71 brick and other clayworking establishments, 34 textile mills, 34 iron plants, 31 flouring mills, 28 furniture factories and 28 oil mills and fertilizer factories.

It is reported in New York that Mr. Henry Percy Bradford of No. 43 Threadneedle street, London, E. C., formerly in charge of Messrs. Warner, Beit & Co.'s Mexican interests, lately connected with the continental tramways, London tubes, etc., is at Bluffton, Ala., looking at the iron-ore deposits there in the interests of an English syndicate.

Nearly 3000 implement and vehicle dealers are in attendance this week upon the eighth annual convention of the Tri-State Vehicle and Implement Dealers' Association.

THE RAILROAD SPANNING THE FLORIDA KEYS.

[Written for the Manufacturers' Record.]

Studying the plans for the extension from Miami, or rather from Homestead, just below Miami, to Key West of the Florida East Coast Railway, Secretary Root once said that he regarded this undertaking as second only to the Panama canal as the most important enterprise before the American public. What Secretary Root voiced as the expression of his opinion is in harmony with the views of many who have given close study to the remarkable work of Mr. H. M. Flagler in build-

ing the Panama canal. The prediction made over 50 years ago by Commodore Maury, the great pathfinder of the seas, that in the Gulf of Mexico, when an isthmian canal had been constructed, would center the commerce of the world, is now being recognized by all mankind as sure of fulfillment. This Gulf is destined to be, not as some have said, "the Mediterranean of America," but far more than that—more than the Mediterranean has ever been to Europe, for it will not only be the center of the commerce



KEY WEST'S PROXIMITY TO CUBA AND PANAMA.

ing along the ocean shore of Florida an extension of his East Coast Line, which will be the only railroad in existence which may properly be called "an ocean line," reaching Key West, the nearest port to the West Indies and to Panama. By this line Key West is made one of the dominating points in the business and naval advancement of the United States. With a through rail line that port immediately becomes of great strategic importance in the wonderful developments which are now taking place in the West Indies and which must inevitably follow in all the ramifications of the world's trade the opening of

of this country, but here will center much of the world's commerce passing through the gateway between the Atlantic and the Pacific.

In the light of the possibilities which will follow the construction of the canal, and looking to the inevitable great development which is ahead of Cuba and other West Indian islands, Mr. Flagler, with that farseeing intuition which has enabled him and those associated with him in other vast enterprises to forecast the future far in advance of others, and to this much of their success is due, is building from Homestead to Key West the most unique

railroad ever constructed. It justly merits Secretary Root's enthusiastic commendation as, next to the Panama canal, the most important enterprise of the day.

In the MANUFACTURERS' RECORD of October, 1905, we gave a comprehensive story of this undertaking as then projected. The work which has been done since justifies some illustrations which are given in this issue showing the character of construction and of the country through which the road will run. It will be remembered by those who read the full story as published last year that the projected extension from

the thickness of the arch at the crown, ballast, ties, etc., making the track 31 feet above the level of the water.

"Of water openings there are seven, 25 feet each. These are in the solid embankment, and are only intended for rowboats and small craft.

"Of drawbridges there are to be three, with openings aggregating 410 feet. The remaining distance, about 65 miles, is made up of the islands or keys over which the road passes.

"The equipment to be used in the work is as follows: Six tugs, 1 stern-wheel



APPROACH TO DOVE CREEK.

Homestead, 28 miles south of Miami, to Key West is 126 miles. The work from Homestead south is made up, in round numbers, of 60 miles of rock embankment through the waters separating the different keys. There will be four concrete viaducts far enough above the highest storm tide to make the line absolutely safe; in fact, the recent storm, the worst ever known in Florida, has proved beyond question the safety and the feasibility of the entire enterprise. In describing this road last October some of the details given were as follows:

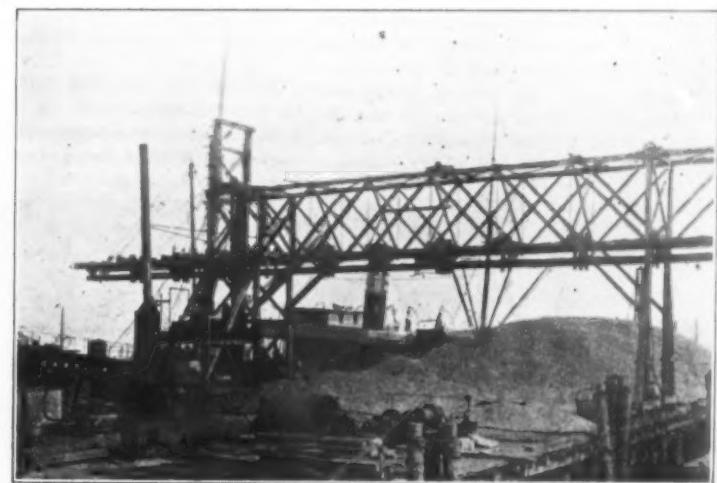
"There are to be four concrete viaducts 31 feet above the level of the water—one from Long Key to Conch Key, 10,500 feet; a viaduct across Knight's Key channel,

steamer, 16 barges 25x100 feet, 24 barges 30x100 feet, 12 barges 20x80 feet, 1 sand dredge, 1 earth dredge for filling the concrete viaducts, 8 barges 40x70 feet with concrete mixers and hoists, 8 piledrivers, 8 towing launches, 1 dispatch boat, 4 quarter boats, 100 dinghys and a wharf at Bahia Honda.

"The material used in the construction of the arches (viaduct) will be as follows: 206,100 cubic yards sand, 286,800 barrels hydraulic cement, 176,900 cubic yards stone, 4810 tons steel."

It is said that these viaducts, aggregating nearly six miles in length, will be the greatest piece of reinforced concrete work ever built.

At Key West concrete docks to furnish



BRIDGE TRAMWAY, KNIGHT'S KEY DOCK.

7300 feet; a viaduct across Moser Key channel, 7800 feet, and a viaduct across Bahia Honda Key channel, 4950 feet, making a total of concrete viaduct 30,550 feet, equivalent to 5.78 miles.

"These viaducts are to be constructed of reinforced concrete, 50-foot spans resting on piers set into the solid rock and strengthened with piles. The base of the pier at rock surface is 28 feet, and at the springing line of arch 20 feet 7 inches. From the water to the crown of the arch will be 25 feet. To that should be added

an aggregate of a little over 5000 feet of wharf front will be constructed, giving ample room for many ocean steamers to load and unload simultaneously. A study of this undertaking, so far-reaching in its effect, stirs the imagination and gives a new conception of the vastness of the undertakings which our great captains of industry are carrying forward for the advancement of the commerce and trade of the country. This enterprise, costing probably \$8,000,000 or \$10,000,000, is the individual work of Mr. Flagler, whose

many millions have for years been poured out in development of East Florida. No one less able financially, less endowed with imagination or more properly a prescience of the vastness of the future of this coun-

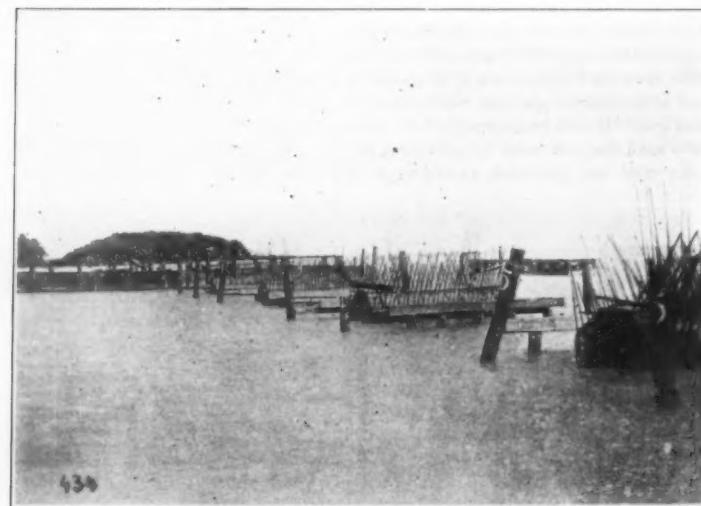
If we would forbid the coming of world leaders in song and story, in art or science or medicine or business, we must change the laws of nature. We must then decree that every child shall be

a hardworking but genius-lacking stone-worker, so may a great captain of industry, captain by virtue of inherent ability and tireless energy, surpass in accomplishments and in the fortune made thereby equally hardworking and equally honest lesser men. The world needs great leaders in every avocation, and it is fortunate when the leaders in finance and industry utilize their command of money in carrying forward enterprises destined to prove of immense value to all the people, the only man at all liable to suffer being the captain of industry or finance who risks his capital in such daring enterprises as this of Mr. Flagler. It is in this light that the extension of the East Coast Line to Key West should be viewed.

The Birmingham District.

[Special Cor. Manufacturers' Record.]
Birmingham, Ala., November 12.

Spot iron in Alabama is so scarce that the price quoted for the product is now over \$23 per ton, and the statement has been made that \$25 was offered for a little lot of the product. The furnace companies are straining every effort to get out all the iron they can on orders accepted some time ago. One of the larger companies in this district will be delivering iron on orders accepted back in July, when prices were under \$13.50 per ton. No. 2 foundry. There is quite a bit of iron being sold right now for delivery during the



CONCRETE PIERS SHOWING STEEL REINFORCEMENT.

try could ever have dared such a costly undertaking, which at first seemed to most people as visionary as did the winter palaces of St. Augustine and Palm Beach when Mr. Flagler commenced the expenditure of millions upon these splendid hotels. As the building of these magnificent winter resorts and the settlement of the country tributary to the East Coast Line has made much of Florida almost a new land, more than fulfilling the highest expectations which Mr. Flagler could have had when he began this work, so the building of this extension to Key West and of the great docks and warehouses at that port is doubtless destined to be one of the most important moves in the railroad and commercial development of this country.

But for the vast accumulation of wealth in these latter days such an enterprise as this Key West line—and even such developments as have marked Mr. Flagler's work in the building of the Ponce de Leon and the Royal Poinciana and the creation of the fruit-growing and trucking industry, now so profitable in East Florida—could never have been accomplished. This was a case where individual energy, backed by many millions of individual wealth, was essential to the building of an enterprise worth to the whole country many times what it can ever be worth to the man who risked his millions to make it possible. When the work of such mighty leaders in

born with exactly the same brain and physical stamina as every other child; that each shall have exactly the same degree of application, of initiative and of devotion to work. We must remake the world and



ROCK CUT, WOODLEY'S ISLAND.

change the order instituted by an all-wise Creator and make all of the same dead level in every form of human activity. If we cannot do this in science and art, in

second quarter of the coming year. All iron is selling in this district above \$17.50 per ton now. Some of the iron men state that inquiries are being received now for iron to be delivered during the last half of the coming year. Positively no apprehension is felt as to the demand for the entire coming year. The raw material supply in this State is still of an uncertain quantity, though as yet there is no report that any furnaces have failed to make iron on account of this condition. One of the announcements in the iron world in this section during the past week was that one of the smaller furnace companies, manufacturing between 150 and 175 tons of iron daily, had not been selling much iron, if any, for delivery during the latter part of the first quarter of the coming year. The intimation was that their iron would be placed on the open market shortly, a policy that will prove decidedly profitable. The gentleman who made this statement anticipates selling his iron at the top-notch price, and he stated that he had information that his was not the only company which had been holding back in the way of selling in the hopes of getting the best possible price.

The transportation facilities in this section are a little improved, though far from being what they should be. It is given out on good authority that there will be but little if any suspension of railroad operations

for the holidays this year. This means that with the exception of the days themselves there will be no interruption in the business of the roads.

The home consumption is as strong as ever. All local consumers of iron are having their demands met, though in the majority of instances orders were placed in time for the better part of the melt for the year.

The coal market in Alabama is strong, the only disturbing element being the transportation facilities. There is great complaint as to the railroad car shortage, with no relief promised for the immediate future.

The Iron and Metal Trades.

The Iron Age in this week's issue says: "October was a record-breaking month, so far as the production of pig-iron is concerned. The output of coke and anthracite iron for the 31 days was 2,196,808 gross tons, against 2,165,632 tons in March of this year and 1,970,962 tons in September, these totals being exclusive of charcoal pig-iron. The greater part of the increase in the output of October over September was contributed by the steel companies, which reached the tremendous total of 1,452,200 tons, as contrasted with 1,264,380 tons in September."

"The high output is reflected in the estimates of capacity of the furnaces in blast on the first of this month, when they were running at the rate of over 500,000 tons per week, the first time that that mark has ever been passed in the history of the American iron industry. And yet, with our plants running at the rate of over 26,000,000 tons per year, there is a scarcity of metal all over the country, and foreign iron is reaching our shores in many cargoes every week."

"A considerable number of cargoes of foreign pig-iron have been purchased abroad for American account, and the market is taking the metal freely. A disposition is developing to buy foreign iron for forward delivery, and iron cannot now be obtained by liners unless it be for delivery next year. The marked difference in this situation now and during the former import movement is that the spread between foreign and domestic iron is much smaller. It was as much as \$3 and \$4 per ton when last considerable quantities were imported. Taking into account the cost of handling and delivering the foreign pig-iron from the vessel's side to the regular routes of transportation, there is now little difference in the cost of foreign and domestic pig-iron."

"Thus far there are no indications that the rise in the price of pig-iron has in any way curtailed consumption. One of the largest consuming interests in the foundry trade, the cast-iron-pipe branch, is having a rush of new business, and inquiries for the coming season are coming up. Machinery manufacturers are exceedingly busy, and along the whole line of rolling-mill products there is a congestion of work."

"In the Chicago district new orders aggregating 100,000 tons for plates, shapes and steel bars have been placed in the past week. The rail mills have booked additional tonnage. The car makers have added some large commitments, and some good bridge-building orders have been taken. There are specifications out, too, for some important buildings in St. Louis and elsewhere. In the lighter lines can-makers are in the market for considerable quantities of tinplate, and the merchant-pipe trade is booming."

It is thought by some students of the situation that shortage of prime seed may cause about two-thirds of the cotton-oil mills of the South to shut down by January 15.



LUMBER YARD ON LONG KEY.

material upbuilding is studied one cannot but be impressed with the fact that in commerce and industry there are leaders of marvelous ability rivaling in generalship the world's greatest heroes of battle.

Poetry and music, in invention or in generalship, neither can we do it in the world's business affairs. As Kipling may outrank an equally honest but less able poet, as a Michael Angelo may surpass

RAILROADS

TWO ROADS MAY CONNECT.

Carrollton Short Line and the Tombigbee Valley Railroad.

An official notice announces that the change of name of the Carrollton Short Line Railway Co. to the Alabama & Northern Railroad Co. has been legally effected, and therefore the road extending from a junction with the Mobile & Ohio Railroad at Reform, Ala., via Carrollton to Aliceville, Ala., will hereafter be known by the latter name. Only the name is changed, the road in other respects being the same as before. John T. Cochrane of Mobile, Ala., is president. He and his associates built the road several years ago. Carrollton is the county-seat, and Aliceville, which is in the valley of the Tombigbee river, is quite a cotton market, there often being more than 10,000 bales of cotton hauled into Aliceville and sold there. The road is still owned by Mr. Cochrane and his associates, and while it is stated that there is no immediate intention to extend the line, it is rumored that the change of name forecasts an extension and improvement of the property.

It is an interesting fact that President Cochrane of the Alabama, Tennessee & Northern Railroad is also president of the Tombigbee Valley Railroad, a line extending from a point near the junction of the Tombigbee and Alabama rivers (from which there is navigation all the year to Mobile bay), and running north through Mobile and Washington counties and into Choctaw county, being at present about 54 miles long, and large forces are engaged in extending this road northward.

These enterprises being under the same management, and it is said the same ownership, present an interesting railroad proposition in Alabama—one which is being watched with considerable interest.

FRIOT VALLEY RAILROAD.

A Texas Line Which Is to Haul Kaolin—Rich Agricultural Region.

Mr. Edwin E. Wolf, treasurer of the United Kaolin Properties Co., with mines in Edwards county, Texas, and office at 726, 727 and 730 First National Bank Building, Chicago, Ill., writes the MANUFACTURERS' RECORD that the information received by it regarding the company's proposed railroad is true. The name of the line is to be the Frio Valley Railroad. The officers and directors are not yet chosen, as no charter has been taken out. Continuing, Mr. Wolf says:

"The length of the proposed line, including switches, tracks, etc., is to be 42 miles, and will connect Leakey and either Uvalde, Sabinal or Chatfield, Texas, making a direct connection with the Southern Pacific Railway.

"The territory through which the road will pass is fertile farming land of a very loamy nature, readily turned and very productive. The Frio valley harvests four crops of Johnson grass, two of wheat, corn, oats, barley and cotton. There are about 1800 inhabitants in this valley, and they also raise cattle, sheep, hogs and Angora goats. There are immense tracts of timber in the section, and an enormous freight will be given the road by our kaolin beds, it being our intention to install a plant with a daily capacity of 500 tons the first year. The land is now being surveyed, but we are not yet in a position to ask for bids for construction and equipment."

Work at Montgomery.

Much railroad work is reported under way at Montgomery, Ala. Construction has begun for new shops of the Western Railway by Cook & Laurie, contractors. These buildings are to cost \$250,000, and

some of the old buildings are being removed to make room for them.

The Mobile & Ohio Railroad is also building storage and house tracks to relieve the crowded condition of its yards, and grading for this work has begun. J. M. Sullivan is the contractor.

RUMORED BIG DEAL.

Mexican Central Said to Have Been Purchased by the Rock Island.

Press dispatches from El Paso, Texas, say it is reported there on reliable authority that the Mexican Central Railway has been purchased by the Chicago, Rock Island & Pacific Railway, and that a connecting link will be built from Brownwood or Amarillo, Texas, to El Paso, by the Rock Island, to be used instead of the El Paso & Northeastern Railway.

A few days ago Mr. A. A. Robinson, president of the Mexican Central, on leaving Mexico City was reported as saying that an important announcement would be made within a week. This, taken in connection with the report that Mr. Robinson had resigned from the presidency, and furthermore that a Mexican official denied that the Government would buy the road, is accepted as tending to confirm the story from El Paso.

New Equipment, Rails, Etc.

The Norfolk & Western Railway has ordered 15 Pacific-type locomotives from the Baldwin Locomotive Works.

The St. Louis & San Francisco Railroad has given an order to the American Car & Foundry Co. for 250 gondola cars. It has also ordered from the American Car & Foundry Co. 250 Williamson ballast cars and 150 Rodger ballast cars of 80,000 pounds capacity.

The Pennsylvania Railroad is building 25 heavy freight engines at its Juanita shops. It has also, it is reported, reserved space at the Baldwin Works for over 100 locomotives.

The Seaboard Air Line has given an order for 1000 box cars to the Pressed Steel Car Co.

The Norfolk & Western Railway has placed its order for 25 coaches and 10 express cars with the Hicks Locomotive and Car Works, and for 4 combination passenger and baggage cars with the Harlan & Hollingsworth Company.

The Chesapeake & Ohio Railway has ordered from the American Car & Foundry Co. 421 box cars, 148 flat cars and 77 stock cars, all of 80,000 pounds capacity and to be delivered in January and February. It has also ordered from the Standard Steel Car Co. 2000 hopper cars.

The International & Great Northern Railroad is reported to be contemplating the awarding of a car contract.

The Nashville, Chattanooga & St. Louis Railway has an order with Baldwin's for 9 locomotives.

The Missouri Southern Railroad has given an order to the Rogers Works for 1 locomotive.

The Baldwin Works has received an order from the Atchison, Topeka & Santa Fe Railway for 23 compound Atlantic-type locomotives.

The Illinois Central Railroad has ordered from the Cambria Steel Co. 1100 drop-bottom gondola cars of 100,000 pounds capacity each, to be delivered December 15, and from the Standard Steel Car Co. 300 flat cars of 100,000 pounds capacity for delivery February 15.

The Kanawha & West Virginia Railroad has ordered from the Hicks Locomotive and Car Works 244 gondola cars of 80,000 pounds capacity each, delivery to begin in December.

The Mississippi Central Railroad is building 200 flat cars of 80,000 pounds capacity at its shops at Hattiesburg, Miss.

The Texas & Pacific Railway is reported to be receiving the first deliveries on its order for 2500 box cars. An order for 10 passenger locomotives for the company is also being filled.

Among the recent rail orders reported are the following: 20,000 tons from the Pennsylvania Steel Co. for the Atlantic Coast Line, 33,000 tons from the Carnegie Steel Co. for the Texas & Pacific Railway, both for 1907 delivery. The South & Western Railway is reported to be figuring on an order for 20,000 tons.

The United Railways & Electric Co. of Baltimore proposes to order for use next summer a number of semiconvertible cars, including 40 cars for high speed.

The Georgia Railway & Electric Co. of Atlanta will, it is reported, purchase a number of double-truck cars.

A dispatch from Topeka, Kan., says that the Santa Fe has appropriated \$8,000,000 or \$10,000,000 for new locomotives and cars during the coming year. An order recently placed includes the following to be delivered all by next June: 1600 coal cars, 400 ballast cars (also used for coal), 500 stock cars (drop bottom may be used for coke), 2500 box cars, 500 refrigerator cars, 100 way cars, 20 first-class coaches, 25 smoking cars, 15 chair cars, 17 baggage cars, 5 postal cars and 50 locomotives. Last summer orders were given by the Santa Fe for the following to be delivered by January 1: 2000 box cars (500 received), 700 ballast or coal cars, 300 tank cars, 245 flat cars, 63 baggage cars and 20 way cars. Part of the Santa Fe's large equipment orders, made up since a year ago and including about 150 locomotives and 9000 or 10,000 cars, are still undelivered.

The new freight locomotives to be built by the Pennsylvania Railroad will, it is said, be the largest of the consolidation type ever constructed for it. They will have driving wheels 5 feet 2 inches in diameter, cylinders 24x28 inches, heating surface of 3850 square feet, and will weigh about 225,000 pounds.

Texas Western May Be Rebuilt.

The sale of the property of the Texas Western Railroad has been ordered by the United States Court at Houston, Texas. The road has not been operated since 1895, and it is said that nothing is left but the right of way, although the company's claim to that is disputed both by the city of Houston and by farmers along the line. Elijah Smith of Boston, one of the owners of the road, is said to hold a judgment of \$150,000 against it, and the probable purchaser is a company which is trying to build a new line out of Houston. The road was built from Houston to Sealy, Texas, narrow gauge, 52 miles, construction starting in 1871. Owing to the financial panic of 1873, the road became involved in money difficulties from which it was never freed. The line was originally intended to run via San Antonio into New Mexico. About a year ago it was reported that Mr. Smith would endeavor to interest others in a movement to rebuild and operate the property.

Mobile & Ohio's Year.

The annual report of the Mobile & Ohio Railroad, covering the fiscal year ended June 30, 1906, shows that the mileage operated was the same as in 1905—926 miles; the gross earnings were, 1906, \$9,445,927; 1905, \$8,267,602; expenses and taxes, 1906, \$6,545,434; 1905, \$5,650,885; net earnings, 1906, \$2,900,493; 1905, \$2,616,717; total income, 1906, \$3,025,303; 1905, \$2,744,053; surplus, 1906, \$493,690; 1905, \$408,095; surplus after payment of dividends, 1906, \$192,600; 1905, \$165,271.

The expenditure for maintenance of way and structures was \$1417 per mile in 1906, as compared with \$1273 per mile for the

preceding year. Five new steel bridges were built, and a contract has been made to replace four light bridges between Meridian, Miss., and Mobile, Ala., three with modern steel bridges and one with a reinforced concrete arch. During the past five years nearly 500 miles of 70 and 75-pound steel rails were laid in place of 56 and 60-pound rail. The 60-pound rail now in the main track is principally on the Montgomery division, but it will not need to be replaced for several years. The equipment of the company consists of 222 locomotives, 124 passenger-train cars, 9648 freight-train cars and 381 miscellaneous cars.

The company carried 4,745,783 tons of freight, and the ton mileage was 1,114,905,000. The company also carried 1,155,718 passengers, and the passenger mileage was 45,887,000.

Sedalia to Jefferson City.

Concerning the proposed interurban railroad from Sedalia, Mo., to Jefferson City, Mo., Mr. J. W. Mellor writes from Sedalia to the MANUFACTURERS' RECORD as follows:

"The name of the company is the Missouri Interurban Railway Co., and the length of the line is 70 miles, the points to be connected being Sedalia, Smithton, Otterville, Soleville, Bunceton, Prairie Home, Cedron, California, Centretown and Jefferson City.

"The officers are J. D. Starke, Soleville, president; J. W. Mellor, Sedalia, vice-president; E. W. Moore, Bunceton, treasurer; C. W. Thomas, Jefferson City, secretary; B. H. Colby, S12 Security Building, St. Louis, engineer in charge.

"We have secured about one-half of the right of way, but will not be ready to commence construction until after January 1, 1907."

Rome Electric Railway Sold.

The City Electric Railway Co. of Rome, Ga., has been sold to capitalists of Louisville, Ky., including S. S. Bush, Attila Cox, Jr., and others, the deal being closed with J. L. Bass, president of the company. The sale includes the electric car line and the commercial lighting plant. It is said that the new owners, who are already interested in several other electric railways in the South, will make extensive improvements, including the building of new lines. President Bass is reported as saying that at least \$100,000 have been expended on building a new plant and other improvements. He declined to state the purchase price, which, it is reported, will be altogether \$300,000. The formal closing of the deal is to take place about November 20.

Arkansas, Oklahoma & Northwestern

Mr. S. M. Porter, a director of the company, writes the MANUFACTURERS' RECORD that the Arkansas, Oklahoma & Northwestern Railway Co. proposes to build a line 160 miles long from Caney, Kan., to Fayetteville, Ark., via Nowata, Vinita and Siloam Springs. The preliminary survey is now being made by a full corps under the direction of B. J. Dalton, chief engineer. The officers of the company are W. C. Meeker, president; John A. Wettack, vice-president; John A. Orendorf, secretary; J. R. Harris, treasurer, and E. B. Lawson, attorney; headquarters at Caney.

Change in Firm Reported.

The Lane Brothers Company, railroad contractors of Esmond, Va., is reported to have added Thomas S. Martin to its official staff, he being elected vice-president and general counsel. The officers now are H. L. Lane, president; Thomas S. Martin, vice-president and general counsel; A. G. Bell, treasurer, and C. W. Lane, secretary.

TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

A New Cotton Gin.

Frequent reference has been made in the past by the MANUFACTURERS' RECORD to improved machinery used in ginning cotton. In this connection it is of interest to call attention to a new cotton gin which has been sent to Greenville, Miss., for its first test in the field. This gin is built by the United Cotton Gin Co., 76 William street, New York, whose general manager, J. E. Cheesman, describes the new machine as follows:

"This gin is a radical departure from all other tried methods of ginning cotton, built upon broad and basic patents never before attempted in the art of ginning cotton. It is believed to be the third basic patent in the cotton-ginning art granted by the Government. This machine differs from all other methods of ginning in its use of white crystal corundum disks. A series of 16-inch disks three-quarters inch in thickness are placed upon a shaft three inches apart and the cotton is ginned upon both sides of each disk running in close contact, but not touching fixed ginning blades. There are 16 disks, each giving a ginning surface of 11 inches, or equal to a ginning roller of 14½ feet long. It is fed with the ordinary cotton feeder now in use, and discharges its cotton without the use of a brush wheel or any other attached means. The claimed advantages of this system of ginning over the saw gin is the freedom of saw-cut fibers, producing staple longer, of greater strength and less waste. Its capacity is equal if not greater than the saw gin, with seeds clean and fiber enhanced in value. It will gin long or short staple, Sea Island, Egyptian or the short staple equally well and without a single readjustment of any parts of the machine. The machine is constructed upon the exact lines and measurements of a 70-saw gin, and is adapted to the present system of ginning now universally in use."

American Bag Co.

The American Bag Co. of Memphis, Tenn., has awarded contract to the Selden-Breck Construction Co., Fullerton Building, St. Louis, Mo., for the erection of three-story factory building of concrete construction, 180x400 feet, divided in the rear into two long wings. The structure will be equipped with machinery for manufacturing cotton and burlap bags. Messrs. Shaw & Pfeil, architects, of Memphis, were previously reported as preparing the plans and specifications. The American Bag Co. was reported in the MANUFACTURERS' RECORD of September 20 as organized with a capital stock of \$250,000, W. H. Carter being vice-president. It plans to establish a plant for bleaching cotton cloth to be consumed and eventually to have a mill for manufacturing this cotton cloth.

Flint Company Begins Construction.

Construction work was begun last week on the cotton-mill buildings of the Flint Manufacturing Co., Gastonia, N. C. This company was mentioned in the MANUFACTURERS' RECORD of October 4 as incorporated and having perfected organization, intending to establish a mill of 5000 spindles with accompanying combers, twistlers and other machinery. The product will be

fine combed yarns, Nos. 40 to 60 and 70. The machinery is expected to be in position in the new buildings by May, 1907. Mr. George A. Gray is president of the company; L. L. Jenkins, vice-president; L. F. Groves, secretary-treasurer, and J. R. Withers, superintendent. Capital stock is \$150,000.

Will Manufacture Fancy Shirtings.

The Transylvania Company of Rosemary, N. C., has been incorporated with an authorized capital stock of \$50,000 by E. E. Bowen (president), Greensboro, N. C.; G. W. Hayes, W. H. Bowen and G. G. Ballard of Rosemary; L. S. Carman (secretary-treasurer), J. H. Lyerly, J. L. Cobb and M. M. Faision of Roanoke Rapids, N. C., and others. This company has completed a plant for the manufacture of fancy shirtings and towels. Its initial installation is 16 looms and complementary machinery.

The Bradford Knitting Mills.

The Bradford Knitting Mills of Statesville, N. C., has begun the construction of buildings for its proposed plant. It has been decided to install an equipment of 15 knitting machines, with a dyehouse, both steam and electricity to be used for power purposes. This company was reported organized in the MANUFACTURERS' RECORD of May 3. Its authorized capital stock is \$100,000, and \$25,000 is understood to have been paid in. Mr. Eugene Morrison is president.

To Build an Addition.

It is stated that the Abingdon Cotton Mills of Huntsville, Ala., has decided to erect an additional building and install considerable new machinery. The company has awarded contract to E. L. Patterson for the construction work, calling for an addition 60x80 feet to the present structure at a cost of about \$15,000. It has at present 15,000 spindles and 523 looms. The Abingdon Cotton Mills was formerly the Madison Manufacturing Co.

The Pickens Mill.

Construction work is progressing on the buildings of the Pickens Mill at Pickens, S. C. This company was reported last July and previously by the MANUFACTURERS' RECORD. It will establish a plant of 15,000 spindles and 450 looms for the manufacture of cotton cloth, expecting to begin operations by May, 1907. Messrs. John F. Grandy & Son of Greenville, S. C., are the contractors for the building.

Wants Translucent Fabrics.

The C. B. Ford Company of Richmond, Va., wants to purchase translucent fabrics for skylights, shop roofs and other purposes.

Textile Notes.

It is rumored that Scott Harvin will establish a knitting mill at Manning, S. C.

The Rockmart Hosiery Mills of Rockmart, Ga., has been organized to establish a knitting mill. Mr. James Long is president; A. R. Beasley, vice-president; A. H. Graefer, secretary, and James Hatton, treasurer.

The Laurel Mills Manufacturing Co. of Roswell, Ga., has petitioned for a 20-year renewal of its charter and privilege of increasing capital stock from \$55,500 to \$150,000. The company's present plant operates 12,600 spindles and 168 looms.

The Union Central Light & Ice Co. of Hubbard City, Texas, will sell \$25,000 of 6 per cent. gold bonds, redeemable after two years. W. A. Bass is president and manager of the company. Further particulars will be found in the advertising columns.

COTTONSEED

The Cottonseed.

J. A. Eddins, Jr., manager of the Refuge Cotton Oil Co., Rosedale, Miss., writes in *Cottonseed*: "Nowhere in the world does the little cottonseed produce profit to the planters as it does in the Southern States, and, in fact, this is the only part of the world where it will grow or yield profitably, all other sections of the world having tried to grow it but failed to make it pay. The planters in these States have now been planting cotton for the past 75 or 80 years, and it is surprising to know that there is not one in a thousand of them who knows anything about the nature of the plant he produces. They have been simply planting, cultivating and gathering the fruit without a knowledge of its nature or its possibilities when properly fertilized and cultivated. These conditions continue to exist because cotton has produced a profit to them even under the present unscientific conditions of planting. The planter should first study and know the nature of the plant, and what fertilizing properties, proportions and quantities are required to grow it most profitably. He should then have his land analyzed to know what properties are insufficient, and these properties should be distributed broadcast, the land well broken about 10 inches in depth and then thoroughly cultivated and prepared before it is planted. As the feeders or roots to the plant grow out about eight feet in every direction, each plant should be at least 8 or 10 feet apart to allow these very small, tender feeders to grow out their full distance to feed the plant, and thus support all of the foliage put on. The plant would then put on as many feeders or roots as it would foliage, preventing the shedding of the foliage as it does from extreme changes of the weather. The cultivation should then be very light or shallow, just sufficient to kill the foreign vegetation, for the ground will be interwoven with these little feeders, which should not be disturbed. The writer has seen the poorest land in these States produce three bales of cotton per acre when fertilizer with cottonseed meal, phosphate and German kainite, and the production may even be greater than this. I am satisfied that if the nature of the growth of this little cottonseed was properly understood by the planters and it was planted, properly fertilized and cultivated in a scientific way, it would be only a few years before every acre planted would be producing from two and one-half to three bales of cotton. This would yield him an enormous profit and increase the value of the land from \$50 to \$200 per acre. The hull in which this wonderful kernel is encased is one of the best-known foods as roughness for stock, and on account of the short fiber which clings to it by being ground up can be manufactured into the best grade of commercial paper. The oil is the finest edible oil or fat on the markets of the world. The manufacturers are today weaving it into finest fabrics, which is the most economical and most favored of all wearing apparel, and it has lately been discovered that by a certain process of manufacture it can now be spun into silk equal to that of the silkworm."

American Cotton Oil.

The seventeenth annual report of the American Cotton Oil Co. shows that the total profits for the year amounted to \$1,618,536, and the net profits, after the payment of interest on the debenture bonds, was \$1,393,536. After the declaration of 6 per cent. on the preferred stock and 2 per cent. on the common stock (the latter to be paid December 1) the balance carried to the general profit and loss account was \$376,878. The company now has issued and outstanding \$20,237,100 of

common stock and \$10,198,600 of preferred stock, besides \$5,000,000 of 4½ per cent. debenture bonds which mature November 1, 1915. The total assets of the company are \$37,268,245. The total balance to the credit of the general profit and loss account is \$7,430,110.

It is noted that despite the smaller cotton crop the business of the company was greater and yielded larger profits than either of the next two preceding years. Concerning the pure-food laws, the report says it is believed that the Government inspection stamp certifying to the purity of edible products will tend to increase their sale. The company spent \$202,793 for additions to its property, and it also ordered 150 additional tank cars of 8000 gallons capacity each and of all-steel construction, all of which will be delivered before November 30. Besides these cars there are water-front improvements at the factory at Guttenberg, N. J., and factory equipment under contract, making in all \$453,792. Real estate, buildings, old machinery, etc., amounting to \$213,328 having been sold, there has been a net increase of \$240,463 in the permanent investment account.

The report covers the fiscal year ended August 31, 1906, and is submitted by Geo. A. Morrison, chairman of the board.

FOREIGN LETTERS

The MANUFACTURERS' RECORD is so widely read in foreign countries that we are in constant receipt of many letters from all parts of the world. Some of these letters indicate the disposition of foreigners to buy American goods, and are therefore of interest to our readers.

Wood Staining in Colors.

G. Cuervo Herrero, Claudio Coello 33, Madrid, Spain:

"I permit myself to make inquiry about woods impregnated with various colors. There are brought into this market from Switzerland various woods saturated with different colors by special process, and with such success that the operation once done the wood ever after retains its color. These woods are sometimes given a bath of aniline when it is desired to vary the tint. I understand there are factories in your country engaged in this kind of work. If any of these people would like to open up trade in our market I should like very much to get the agency with commission on sales, and I am sure that I could secure a good trade; in fact, I am doing that now for other houses. Prices should be in cubic meters, free on board at Spanish port, payment to be made by deposit of amount of invoices in bank until it is found that goods are in accord with order."

Condensed Milk for Spain.

G. Cuervo Herrero, Claudio Coello 33, Madrid, Spain:

"I am greatly interested in obtaining agencies from manufacturers of our country. It is necessary, as far as purchasers here are concerned, to offer goods at prices free on board at port of Spain. Among the articles which will easily find a market here is condensed milk. Up to this time, in consequence of protective duties, preference has been given to Swiss product. I have been established here as agent for many years, and have sub-agents in different provinces."

Well-Drilling and Water-Works.

H. J. Reesink & Co., Zutphen, Havenstraat, Holland:

"We should like to see complete illustrated catalogues of well-boring tools and machinery for water supply, also lowest prices and best cash terms for goods packed and crated for export and delivered free on board ocean steamer, New York or other American seaport."

LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

Southern Hardwoods for Export.

Some statements as to the hardwood possibilities of the South were made in New Orleans last week by Wm. C. Gellibrand of London, England, who had been visiting some of the principal lumber mills in the New Orleans section. Mr. Gellibrand said in part:

"I have made a particular feature of dimension stock in hickory, ash and persimmon wood, the two former being for handle-makers and textile-mill specialties, and the latter for shuttle-making. I am connected with one of the largest mills in Louisiana, which was recently erected at great cost for the manufacture of these articles. For many years I have been trying to get a satisfactory source of supply for these specialties, and have had great difficulty, owing to the growing demand on this side. Of course, the great demand here has made it hard to get material for export."

"In regard to the general hardwood business in this section, I am experiencing ever-increasing difficulty in finding dry stock for shipment. The domestic demand, especially for high-grade white oak, has put up prices to such an extent that our English trade will not meet them, and it looks as if our buyers must either pay more or go without."

"There is no doubt but that the prices for hardwoods generally in the South will increase slowly, but surely. Of course, there may be some setbacks owing to the increased production caused by the high prices, as has recently been true in yellow pine, but the general trend is bound to be toward higher values, and a few years hence we shall look upon the present range of prices as ridiculously low. Hardwoods have been too much neglected in the South, and hardwood timber lands have been practically given away, but this state of affairs is now coming to an end, and people are beginning to know what they really have in value which a few years ago was considered of little account."

"The great drawback to the hardwood business in the South is the haphazard method of manufacture. This business is operated by a number of little mills without proper equipment, and often by parties without requisite knowledge to produce proper material."

"All the large operators who have gone into hardwood business seriously with sufficient capital and proper equipment have made and are making money, and it is only the little man who butchers the timber and consequently gets only half of what he should get, who is always on the sharp edge of destruction."

"With intelligent methods there is a source of wealth in the South in hardwoods that will only be appreciated perhaps when it is too late. In the extreme South exclusive attention has been given to yellow pine and cypress, and the result has been that the operation of these woods has been brought almost to a science with excellent effect on the profit of the operators. Apply the same methods to hardwoods and the results will be similar."

Lumber Properties Purchased.

The MANUFACTURERS' RECORD is advised that parties interested in the John A. Cox Lumber Co. of Vincennes, Ind., and some outside associates have purchased the properties of the Kaupp Lumber Co., Shubuta, Miss.; the Kaupp Lumber Co., the Shubuta & Southwestern Railroad and the Shubuta Light & Water Co. The mill is a single-band and gang, daily capacity of 60,000 feet of lumber, with planer, two dry-

kilns, 32 dwellings, sheds and other structures. The railroad is a standard-gauge line operating 22 cars and two locomotives between Shubuta and Eucutta, a distance of over 12 miles. The electric plant lights the company's properties and Shubuta; its capacity is 2000 16-candle-power lamps. The president of the new operating company will be John A. Cox of Vincennes, Ind.; vice-president, Augustus Coburn of the Michigan Lumber Co., Indianapolis, Ind.; treasurer, W. A. Spain of Vincennes, and secretary-manager, S. G. Blalock of Shubuta. Mr. Blalock states that his company needs a second-hand 18-ton standard gauge rod engine and two miles of 35-pound relayers, with accompanying supplies.

Budde-Lindsay Manufacturing Co.

The incorporation of the Budde-Lindsay Manufacturing Co. of Jackson, Tenn., with a capital stock of \$30,000, was mentioned last week by the MANUFACTURERS' RECORD. The new company has not yet elected its officers, but announces that it intends to manufacture fixtures for banks, churches, stores and offices, about \$25,000 to be the cost of buildings and equipment. A two-story brick structure 60x140 feet will be erected to hold the machinery. Messrs. R. A. Heavener and H. T. McGee are the architects in charge. The company is in the market for a quantity of machinery for the plant, including a 100 to 125-horse-power Corliss engine and boiler, a dry-kiln with a capacity of 50,000 feet and a number of woodworking machines.

The Central Lumber Co.

Among the new lumber enterprises mentioned by the MANUFACTURERS' RECORD last week was the Central Lumber Co. of Brookhaven, Miss. This company will erect three or four frame buildings with composition roof, each about 50x80 feet in size, and equip with modern machinery for sawing and planing lumber, and will also manufacture ice. About \$50,000 is to be the cost of the buildings and machinery of the entire plant. Contracts for the engine, boilers, sawing and planing machinery have not been awarded. The company's general manager is S. E. Moreton, and the architect in charge is A. E. Moreton.

Cooperage Sales Agency.

The Industrial Slack Cooperage Sales Agency applied for charter last week at Memphis, Tenn., the incorporators being Messrs. C. H. Nixon, C. J. De Laney, G. B. Bouling, A. E. Nixon and W. R. Anderson. This company is to be organized by the International Slack Cooperage Manufacturers' Association, which organization is said to comprise the majority of slack cooperage manufacturers of the United States. The general offices of the organization will be in Memphis and the goods of the respective mill operators, members of the association, will be handled through Memphis. The capital stock is \$100,000.

The Appalachian Pole Co.

Telegraph, telephone and trolley-line poles will be dealt in by the Appalachian Pole Co., which has been organized by Messrs. Arbogast Bros. of Marlinton, W. Va. This new company will be incorporated with E. M. Arbogast, president; J. Ed. Arbogast, secretary-treasurer, and A. W. Arbogast, general manager. It has already purchased 10,000 standing poles along the Chesapeake & Ohio Railroad in Greenbrier and Pocahontas counties, West Virginia.

Will Manufacture Wagon Stock.

A plant for the manufacture of wagon stock has been established at Tullahoma, Tenn., by the Wagon Stock Lumber Co., which is capitalized at \$5000. This com-

pany will make axles, tongues, sawed felloes and other similar wood articles. Its officers are M. R. Campbell, Jr., president; J. L. Donn, treasurer, and J. E. Brantley, secretary and manager.

A \$50,000 Company.

The Fenwick Lumber Co. of Fenwick, W. Va., has been incorporated with a capital stock of \$50,000 to deal in and manufacture all kinds of lumber. Its incorporators are Messrs. James Strong of Philadelphia, Pa.; Sherman L. Richards, John C. Tennant and Sarah I. Tennant of Wilkes-Barre, Pa., and John E. Jenkins of Kingston, W. Va.

South Georgia Pine Co.

Messrs. B. Miflin Hood, R. E. Plowden, J. E. Plowden and D. A. Blue have incorporated the South Georgia Pine Co., with a capital stock of \$15,000, and privilege of increasing to \$100,000, for the purpose of operating sawmills, lath mills, shingle mills, planing mills, turpentine distilleries and naval-store plants. The main offices are at Tifton, Ga.

Cedar Lumber Manufacturers.

Mr. Walter S. Crawford of Hillsboro, N. C., wants addresses of manufacturers or dealers in cedar lumber.

Several large shipments of lumber were sent out from Jacksonville, Fla., last week. They included 662,264 feet of lumber cleared for New York on the schooner Henry Lippitt, 360,115 feet of lumber and 2000 barrels of naval stores cleared for New York on the Clyde steamer Apache and 450,000 feet of lumber, 1200 barrels of naval stores and 627 packages of doors and sash cleared for Boston on the Clyde steamer Onondaga.

Proposed Fertilizer Plant.

It is stated that a large fertilizer manufacturing plant will be located at Knoxville, Tenn., during the next several months. The enterprise is projected by Thomas C. Jeffries of Columbus, Ohio, who is interested in the National Soil Vitalizer Co. of that city. He is perfecting arrangements with Knoxville capitalists with a view to investing about \$200,000 for the Knoxville factory. It is hoped to begin manufacturing by next May.

The Tifton Fertilizer Co.

A petition for incorporation has been filed by Messrs. J. M. Price, W. S. Cobb, S. N. Pool and R. R. Dinsmore for the Tifton Fertilizer Co. of Tifton, Ga., with a capital stock of \$10,000 and privilege of increasing to \$25,000. This company's purpose is to manufacture fertilizers; principal office at Tifton.

The Brunswick Steamship Co. is to establish a passenger service between New York, Brunswick, Ga., and Havana, Cuba, early in December, and the steamship Brunswick will be the first vessel placed in this service. The steamships will stop at Brunswick going both ways.

It is reported that the Newport News Shipbuilding & Dry-Dock Co. has been given a contract for the construction of a \$100,000 steel dredge by the American Locomotive Works, the dredge being intended, it is understood, for the National Government.

The Texas Association of Civil Engineers, in session at Waco, elected Messrs. C. G. Wells of Galveston, president; J. D. Dalton of Dallas, vice-president, and E. C. H. Bantie of Austin, secretary-treasurer.

The pig-iron production of France in the first six months of this year was 1,573,504 tons of 2204 pounds each, an increase over the same period last year of 73,000 tons.

MINING

To Develop Mineral Lands.

A charter of incorporation was granted last week to a new company which proposes developing mineral lands in Murray county, Georgia, about 30 miles from the Ducktown (Tenn.) copper mines. The Alyce Mineral Co. is the title of the new corporation, and it has a capital stock of \$400,000. Mr. J. G. Sterchi is president, Joe P. Davis vice-president and E. C. Gotthard secretary and treasurer, all of Knoxville, Tenn. They and Messrs. W. D. Haun and Gus M. Miller of Chattanooga and N. S. King of Spring Place, Ga., are the directors. It is understood that the company will mine lead, copper, silver and gold, erecting concentrating plants for treating the ores. Several thousand acres of land have been purchased, and a three-mile branch railway will be constructed to connect with the Louisville & Nashville Railroad.

To Develop Tennessee Mines.

Among the new coal companies incorporated last month was the Tennessee Gem Coal Co. of Chattanooga, Tenn. This company has organized with G. H. Holliday of Knoxville, Tenn., president; Lot Davis of Ironton, Ohio, vice-president and general manager, and Walter C. Holliday of Knoxville, secretary-treasurer. Leases have been obtained on a tract of coal land in the Walden's Ridge district near Chattanooga, where mines will be opened and coke ovens constructed. It is reported that this company will probably be interested in building a coal-carrying railroad and a bridge across the Tennessee river at Chattanooga. The company's capital stock is \$30,000.

Developing Kaolin Deposits.

Recently the MANUFACTURERS' RECORD referred to the proposed organization of the United Kaolin Properties Co., having for its purpose the development of kaolin deposits in Edwards county, near Leakey, Texas. The company has since been perfecting its plans and proposes to establish an initial plant with a daily capacity of 500 tons for the first year. The company's officers are in the First National Bank Building, Chicago, Ill. Mr. Milton Wolf of 111 Fifth avenue, New York, is president.

A 500-Ton Concentrating Plant.

One of the new corporations chartered last week to operate in the Joplin fields was the Moark-Nemo Consolidated Mining Co., which has a capital stock of \$200,000. The MANUFACTURERS' RECORD is advised that the company will mine lead and zinc, and intends to operate a 500-ton concentrating plant. About \$50,000 will be expended for the initial equipment. Messrs. Bendelari & Cook of Joplin, Mo., are the engineers and managers in charge.

Arminius Chemical Co.

Articles of incorporation were filed last week for the Arminius Chemical Co. of Arminius Mines, Va. The incorporators are Messrs. J. F. Kernochan (president) and H. H. Mann of New York city, G. A. Wingate of Brooklyn, N. Y.; G. P. Hill of Ridgewood, N. J., and several others. The company has a capital stock of \$10,000 and proposes to mine sulphur, pyrites and other ores. The company has New York offices at 56 Wall street.

The Richland-Jellico Coal Co.

Messrs. James D. Black, James M. Gilbert and John R. Bailey are the incorporators of the Richland-Jellico Coal Co. This company was reported organized several weeks ago with a capital stock of \$15,000, and its purpose is to develop coal properties in Knox county. Its offices are at Barboursville, Ky.

MECHANICAL

Small Vertical High-Speed Engines.

Power-users who are interested in small vertical high-speed engines will find their attention attracted to the two accompanying illustrations. These are views, Fig. 1 being a longitudinal section and Fig. 2 a transverse section of an engine described in a paper by F. R. Still of the American Blower Co. of Detroit, Mich., and presented in the Journal of the Association of Engineering Societies. The engine was developed by an associate of Mr. Still, an engineer, to whom was presented the following ideas as to what he was expected to accomplish:

"1. An engine that could be sold with a guaranty that it would run three months or more without requiring any attention, either to the oiling system or for adjustments, except the filling of the sight-feed cylinder lubricator.

"2. An engine that would be economical in the use of steam and oil.

"3. That could be easily adjusted and not liable to easily get out of adjustment.

"4. That could be used anywhere and for any purpose that an engine can be used for.

"5. That had ample bearing and wearing surfaces to make it long-lived and unlikely to overheat at full load.

"6. That it should be constructed of the best materials for the purpose intended.

"7. That it should be devoid of any semblance to 'freaks' of every sort, and last, but not least, and perhaps the most difficult of all, it must not be so costly to build as to make the selling price prohibitive to the average buyer." Mr. Still continues in part as follows:

"How well these requirements have been accomplished is shown by the satisfactory reports since obtained from the engineers having charge of them.

"Being so thoroughly impressed with the importance of a good system of lubrication, the first step was to work out something more effective than previously used.

"It does not take much thought to arrive at the conclusion that if metal does not run on metal, but is always separated by a heavy film of oil, there can be very little wear. The problem then settles down to the production of the necessary heavy film.

"In looking over the many systems for lubricating engines, the most rational seemed to be forced lubrication by means of a pump. But experience shows this has many defects. The oil being under pressure necessitates extreme care in adjustment, as any bearing being looser than another vents the entire system and destroys the desired effect. Again, any foreign material that may get into the small tubes or grooves which are an essential part of this system will be rammed in tight by the oil pressure.

"To overcome these objections it was decided to adopt a gravity flow, the oil being lifted by a pump to the top of the frame, from which elevation it would flow downward by gravity. In this way large tubes can be used; the velocity of the oil will be rapid, the volume of oil in circulation will be much greater; it will not be necessary to have the bearings tight, neither will they all have to be adjusted exactly alike, and any foreign matter will be washed out instead of being rammed in.

"Being satisfied that this came close to the ideal way of producing the flow of oil, the next step was to distribute the oil along the bearing and wearing surfaces to completely separate them by that all-essential film.

"It has been common to groove the upper or lower half of the journal box, or perhaps both. There are as many ideas on the proper way to groove a box as there are people in the business, and there are

evidently many more who have no ideas at all, judging from the way it is sometimes done.

"Considering the question from a mechanical standpoint, it is at once apparent that an oil film takes up space, so a bearing cannot be tight or the oil cannot get in unless it is forced in at a pressure greater than is exerted on the journal.

"The thicker the film the more space there must be between the metals; hence a loose bearing is desirable if it does not cause pounding.

"When the crank is on the downward stroke it pushes the journal away from the upper part of the bearing. The shaft is also rolling in the direction the crank is traveling. Hence the oil should enter at the beginning of the gap which intervenes between the shaft and bearing and thence be rolled up into the remaining space by the rotation of the shaft. The gap naturally begins at one side of the circumference of the shaft, so the oil grooves should most naturally be on the sides.

"After the crank passes the lower center on the up-stroke oil should flow in from the groove on the opposite side in the same

six they all ran over five months without any adjustments or additional oil.

"One most exceptional case was at Davenport, Iowa, where a 14x7-inch low-pressure engine is running in a school building. The speed is 180 revolutions per minute, the steam pressure 40 pounds. At the start 4.5 gallons of oil were poured into the base, and in two years only one gallon has been added and one adjustment made, which was to the crosshead pin.

"In New Orleans an induced-draft fan was installed on an ocean tug, which is driven by a 5x5 direct-connected engine. The steam pressure is 110 pounds. The engine runs about 360 revolutions per minute. The outfit was installed in February, 1904, and up to November 29, 1905, about 22 months, only three gallons of oil had been put into the engine and one adjustment made to the crankpin. This engine runs continuously, 24 hours per day for three or four days at a time. It is seldom that it ever stops entirely, as it is turning over slowly even when the tug is tied to a dock. It is located in a very hot place over the boiler, and withal is operated under about the worst possible conditions.

"At the plant of the Trexler Lumber

down from above lodges on this cloth and passes through to the reservoir below. Any foreign matter is left on top, and has no tendency to leave the upper surface. Simple as it is, it has been surprisingly effective. As an extra safeguard a fine copper wire screen of ample area was attached to the pump suction and another to the discharge, both being easily removable for cleaning.

"Another source of possible trouble which had to be guarded against is the loosening of core sand from the frame.

"No matter how much care may be exercised in cleaning a casting, some sand is sure to stick for a while, loosen later and cause serious trouble.

"To prevent this the frame is painted inside with two coats of thick white enamel. It took a lot of experimenting to get an enamel that would stand the heat, moisture and oil without softening, but it was finally procured.

"The pump first adopted was of the plunger type, actuated by an eccentric on the shaft. It was thought too complicated, however, and was abandoned for a gear pump. On the shaft is a large bronze worm with coarse teeth into which meshes

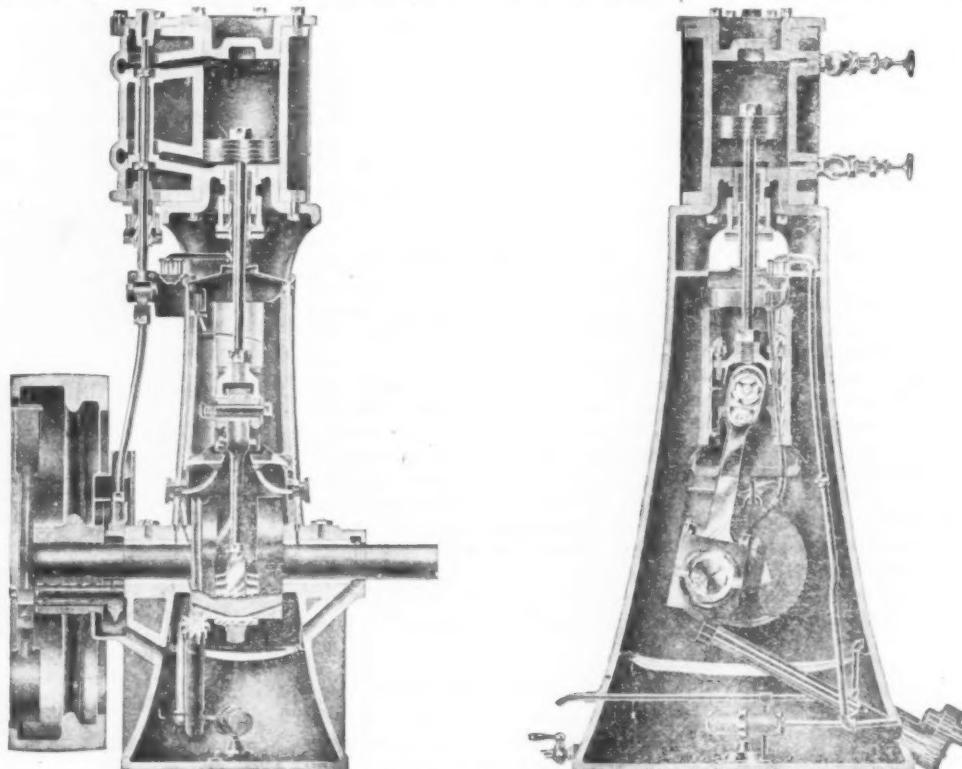


FIG. 1.—SMALL VERTICAL HIGH-SPEED ENGINE.—FIG. 2.

way. These grooves can thus be made large, say from one-quarter inch to three-eighths inch in width and the whole length of the bearing metal.

"The same scheme is applicable to the oiling of the main bearings, crankpin, crosshead pin, eccentric and governor weight pin, and it works to perfection, better even than was ever thought possible.

"To gain some idea of the way it is working, it may be in order to point out a few cases.

"Cards were sent to nearly all the purchasers of these engines, asking them to have their engineer answer the questions printed thereon. The questions were as follows:

"Size of engine?

"When installed?

"Revolutions per minute?

"Steam pressure?

"How often has oil been added since starting?

"Quantity of oil added each time?

"How often have adjustments been made?

"Where have adjustments been made?

"Replies were received in nearly every instance, and with the exception of five or

Co., Allentown, Pa., is another engine driving a blower which is attached to a dry-kiln. This was installed February 5, 1905, and up to November 18, 1905, only one gallon of oil had been added and one adjustment made to both the crank and crosshead pins.

"This engine runs steadily at 285 revolutions per minute 24 hours per day, without stop for Sundays or any other day.

"These few citations are sufficient to show the remarkable effectiveness of the oiling system.

"There were many other problems in the perfection of this system which had to be worked out that were, perhaps, equally as interesting in connection with this oiling system. For instance:

"After the oil has performed its usual functions it must be filtered, cooled and the water separated from it. Any of the usual methods of filtration were found unreliable, as they all allow pieces of lint or grit to pass through. After much experimenting it was found that a plain closely-woven cloth suspended by four hooks from each corner of the frame, hanging just below the crank and above the oil in the base,

gave the best results. All the oil dripping

a small spur gear attached to a shaft supported at an angle of about 45 degrees. The pump gears are within a case attached to the outside of the frame close to the bottom of the base, where they can be gotten at at any time.

"The discharge pipe from the pump is 0.75 inches diameter, and extends up inside of the frame to the top, where it discharges through a sight-feed glass, so the engineer can easily see if the oil is flowing properly.

"The oil then empties through a wire screen into a small tray, through the bottom of which latter project the various oil tubes nearly to the top of same. Each tube has a fine slit cut down the side of it to the bottom of the tray, so as to equalize the flow of oil into them all.

"In adjusting the engine for this system no bearing should be so tight as to make it impossible to easily slide the connecting rod or shaft along parallel with its axis.

"The success attained with these engines, while largely due to the perfection of the oiling system, could not have been attained if it alone had been the only thing carefully developed.

"First of all, good material of the proper

kind has to be used, and all the pins, rods, shaft, piston, valve, crosshead shoes, etc., must be ground on centers to a true diameter and smooth finish.

"The shaft is a forging with suitable counter weights fastened on.

"The connecting rod is a drop forging finished bright.

"The crosshead is cast steel, having brass shoes, wedge-shaped and adjustable at the top and secured with lock nuts.

"The crosshead pin is a special composition of a very fine grain and hard enough to take on a very smooth finish. This pin, in combination with the brass used, will not cut. The brasses have been set up as tight as they could be driven on a dry pin and the engine run all day without the least signs of cutting.

"The piston rings are roughed out, cut, drawn together and clamped. They are then ground to the cylinder diameter. The crankpin brasses are lined with the best quality of Babbitt metal, peened in and scraped to a perfect surface. Adjustment to these brasses is accomplished by two tap bolts turned out of hexagon steel, threaded on the lower ends. Above the nuts the tops of the bolts are turned down to a smaller diameter and threaded again for a lock nut. The two tops are joined together by a yoke-shaped washer which is between the nut and lock nut to prevent either of the bolts working out if one of the lock nuts should loosen.

"The flywheel is so designed that the greater part of the weight comes in a plane close to the end of the bearing, thereby relieving to a great extent any strain on the shaft. The inclosing panels are held in place by a single milled thumbscrew, thus overcoming the necessity for taking out a dozen or more screws to get off the cover plates.

"Every engine is set up, given a day's run under full load and then taken down, carefully inspected, and if found in a satisfactory condition is reassembled, indicated and adjusted before leaving the shop.

"Due to the high speed, small clearance and a well-fitting valve and piston, the steam consumption has been brought down to an average of less than 37 pounds per horse-power hour for a 6x6 engine, with 100 pounds pressure, when running 500 revolutions per minute with full load.

"It is rare that the same economy is attained with other engines of the same size, as most of them take from 60 to 80 pounds per horse-power hour.

"It really seems as though about all has been accomplished in the design of these engines that can reasonably be expected in any engine.

"They are machines, and as such are not 'fool proof,' but they can carry a heavy load, run at high speed, do with less attention and still perform their duty better than can the majority of engines."

Modern Steel Sheet Piling.

In many kinds of construction work it is frequently necessary to use piling in order that proper foundations may be secured for various kinds of structures. This is especially true on river frontage and wherever water is present in small or large quantities in the ground being utilized as a site. Piling is notably required in the construction of docks and dry-docks, wharves, bridges, lighthouses and many other kinds of buildings, for building breakwaters, caissons, dams, irrigation plants, dykes and levees, locks, mine shafts, submarine work of different classes, etc.

To provide the best kind of piling has attracted the attention of engineers during recent years, and it is timely to refer, in this era of widespread construction, to the United States steel sheet piling. This material and method was first introduced to

the construction world early in 1905, and it is proving an important factor in the development of modern construction methods. Numerous and varied interests throughout the world have found this steel sheet piling an indispensable factor in their systems and equipments.

This is indicated in a brief mention of some important construction work in which it has been used. For instance, its first use was at Powers, Col., where a cofferdam was being built in the Arkansas river for reinforced concrete diversion weir, the piling being reused frequently. This work was for the Arkansas Valley Sugar Beet & Irrigated Land Co. Another instance was the permanent elevator shaft at the passenger entrance of the Hudson river tunnel, Jersey City, N. J. Another, a cofferdam on the Scioto river at the Norfolk & Western Railway bridge, the piling being reused frequently on the Norfolk & Western Railway and Baltimore & Ohio Railroad. Another, the intake cofferdam at the foot of Gold street, East river, Brooklyn, N. Y., the piling being reused in New York city. Another, the Belle Fourche (South Dakota) project, main supply canal, etc., United States reclamation service, the piling being reused frequently. Various other instances could also be cited.

The United States piling is plain rolled sections ready for use as they come from the mill. There are no bolts, rivets or other additional parts to become loose, damaged, destroyed or lost in handling, in transit or in service. The intersliding and interlocking features have nothing to spread, distort, shear or destroy the interlocking arrangement to the impairment of strength and utility or to resist or retard either the driving or withdrawing of the piling. This is a scientifically designed interlocking and water-tight steel sheet piling, and wholly eliminates the weaknesses, objections and frictions of auxiliary parts.

Each pile of each respective section is uniform in strength, interlocking, interchangeable and complete in itself, and all sections are interchangeable one with another.

The cylindrical ribs give the greatest strength and offer the least resistance in driving or withdrawing.

United States steel sheet piling is claimed to be uniformly stronger against lateral pressure than other forms of steel sheet piling of greater weight per square foot.

The rounded ribs and flat webs present a uniform and free face for concreting where it is desired to dispense with the use of wood forms. Three-ply tar or other heavy paper suffices to prevent contact between the concrete and the steel.

There are no sharp corners, rivet heads or other obstructions to retard or resist the withdrawing of piling in concrete work.

The piling can be withdrawn with ease and facility when it would be impossible to withdraw any other form of steel sheet piling.

It is equally proportioned and balanced sections with relation to the center line of the web, and insures straight driving and perfect assemblment for circles, rectangles, offsets, straight lines, etc., or for "broken joints" construction.

In circular work the minimum practical diameter that can be assembled is five feet, requiring 16 pieces. A circle four feet in diameter can be assembled if necessary.

In "broken joints" construction, frequently employed on account of lack of headroom or unusual conditions, piling of varying lengths can be used advantageously. Each piece is guided and securely interlocked by the piles on either side; the upper pieces take full and secure bearings on the whole cross-section area of the

lower pieces, dispensing with the use of plates or other means of securing one piece to another to prevent overlapping in driving.

The most important point to be observed to insure the best results is to see that the piling is driven straight. This is certain of accomplishment by the exercise of ordinary care.

When the first pile is driven in place the locking or socket end of each succeeding pile should be driven over the ball end of the preceding pile.

The ball end not only guides the succeeding pile, but it also makes an effective loosening of the soil to equalize and facilitate the driving of the succeeding pile, the locking end of which is always free and clear for driving.

It is obvious that the locking end is never "choked" or clogged at any time to resist and retard the driving of the adjacent pile.

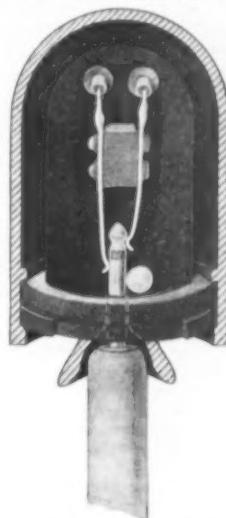
The United States Steel Piling Co. of Chicago, Ill., manufactures and has introduced the new steel sheet piling, and recently issued an illustrated publication presenting details of interest to engineers and contractors.

Lima Telephone Jack Box.

The MANUFACTURERS' RECORD of September 20 referred to a new jack for use on private telephone lines, and shows here-

the assembled parts and the manner in which the metal ball closes the opening effectively against the entrance of moisture, dust or insects.

The utility of the Lima jack box in connection with the portable phone is evident. By having boxes installed in convenient places around large properties inspectors or watchmen can communicate with head-



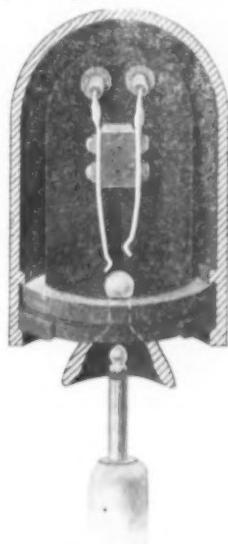
CROSS SECTION OF JACK BOX.

quarters immediately to report trouble or ask aid. Along pipe lines of oil and gas companies the boxes are indispensable to the inspector whose duty it is to report trouble. Many wrecks, bad accidents and delays along the lines of railway companies could be avoided if each trackwalker were equipped with a portable phone and aided by a frequent distribution of Lima



USING TELEPHONE JACK BOX.

with halftones which give an excellent idea of the Lima jack box. One view shows the ease of making connection. Another



CROSS SECTION OF JACK BOX.

jack boxes along the lines. Without them the trackwalker must hurry to the first telegraph station with a report of the trouble and wait to have a message transmitted and answered.

Messrs. W. N. Matthews & Bro. of 229 North 2d street, St. Louis, the manufacturers of this jack box, say that they are meeting with success in its introduction.

A report from Tampa, Fla., says that Scott McLanahan, attorney and capitalist, and R. C. Caples, representing big shipowners of New York and Chicago, have leased for five years the McKay docks on the Tampa river front and announced that a line of passenger and freight steamers will be put on between Tampa and New Orleans.

During October 7365 tons of phosphate rock were shipped through Savannah, Ga., to Hamburg, Bremen and Trieste.

The Tennessee River Improvement Association met at Sheffield, Ala., last week.



PARTS OF JACK BOX.

shows the parts of the jack box ready for assembling and shows how perfectly it is insulated. The two other views show cross-sections of the box, indicating clearly

Construction Department

TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

ALABAMA.

Attalla, Ala.—Iron Furnace.—Reported that the Rome Furnace Co. will shortly put in blast its charcoal furnace, which has been out of commission for several years; capacity 50 tons; general office, Chattanooga, Tenn.

Baldwin, Ala.—Lumber Company.—Mortar Creek Lumber Co. has been incorporated with \$2500 capital stock by J. S. Johnson, W. T. Shepard, J. W. Hanley, Ray Rushton and Phares Coleman.

Bessemer, Ala.—Manufacturing Plant.—Reported that Adler Bros. of Birmingham, Ala., are arranging for the establishment of manufacturing plant on property which they own near the septic plant, and will utilize water from latter plant for their purpose.

Birmingham, Ala.—Land Improvement.—Chartered: Alabama Development Co., with an authorized capital stock of \$10,000. Arthur D. Smith is president; F. W. Dickson, vice-president, and Jerome A. Tucker, secretary-treasurer.

Blanche, Ala.—Water-power Electrical Plant.—Little River Power Co. has been incorporated with \$100,000 capital stock for the development of water-power on Little river near Blanche, to be transmitted by electricity to Gadsden, Anniston, Fort Payne, Ala.; Rome, Ga., and adjacent towns, furnishing electric power to enterprises. The company owns large tracts of land and riparian interests on Little river for many miles through Georgia and Alabama. About 20,000 horse-power to be developed. The transmission to Gadsden will be by cables 35 miles long, with storage reservoirs along the route and branch lines to Rome and Anniston. R. A. Mitchell of Alabama City, Ala., is president; H. T. Henderson, Durango, Col., vice-president, and O. R. Goldman of Gadsden, Ala., secretary-treasurer. (Reference was made to this project in the Manufacturers' Record June 15, 1906.)

Brookwood, Ala.—Bridge Construction.—Reported that the Southern Railway will construct a concrete arch bridge at Brookwood.

D. W. Lum, Washington, D. C., is chief engineer.

Corona, Ala.—Coal and Iron Mines.—Corona Coal & Iron Co. is making improvements at its mines, making new openings, installing four new hoisting engines and building additional houses for miners; present capacity 3000 tons. L. B. Musgrave is president; J. R. Ryan, vice-president, and A. H. Carpenter, general manager at the mines; main offices, eighth floor Brown-Marx Building, Birmingham, Ala.

Florence, Ala.—Granite-block Factory.—Reported that E. L. Clayton of Nashville, Tenn., is considering the establishment of plant to manufacture granite blocks.

Gadsden, Ala.—Car-wheel Works.—It is reported a company will be organized with \$50,000 capital stock to manufacture car wheels, especially freight-car wheels; construction of plant to begin before January 1. Eventually it is proposed by the company to construct completed cars of every pattern. A. H. Quinn of Anniston, Ala., is reported to be interested.

Gulf, Ala.—Cotton Gin.—Jim Pearce & Co. will rebuild in the spring cotton gin recently burned. It is proposed to erect a \$10,000 plant with a daily capacity of 40 bales.

Huntsville, Ala.—Cotton Mill.—The Abingdon Cotton Mills has awarded contract to E. L. Patterson for the construction of an addition 60x80 feet, to cost about \$15,000. New machinery will be installed; company's present equipment, 15,000 spindles and 523 looms.

Hanceville, Ala.—Railway Signal System.—Reported that the Louisville & Nashville Railroad will establish signal system between Hanceville and Calera, Ala. W. H. Courtney, Louisville, Ky., is chief engineer.

Mobile, Ala.—Land Improvement.—E. W. Goss, S. Y. Locke and A. C. Denby have incorporated the United Realty Co. with \$10,000 capital stock.

Mobile, Ala.—Sewerage and Paving.—Southern Bitulithic Co., Nashville, Tenn., is lowest bidder at \$54,949.75 for constructing storm sewers, and is reported as having contract at \$150,000 for paving work in the Fourth district, previously referred to.

Montgomery, Ala.—Road Improvements.—Montgomery county has voted affirmatively the \$250,000 bond issue previously reported for improving and extending county roads. Address County Clerk.

Montgomery, Ala.—Land and Supply Company.—Savage Land & Supply Co. has been incorporated with \$20,000 capital stock by J. W. Savage, H. J. Falls and James L. Davidson.

Montgomery, Ala.—Street Paving.—City

will let contract December 3 for paving a portion of Pleasant avenue and Bell street. R. S. Williams is City Treasurer.*

Tuscaloosa, Ala.—Water-works.—City has voted affirmatively the proposed bond issue for the construction of water-works. Address Mayor Blair.

ARKANSAS.

Cotter, Ark.—Water-power Electric Plant. Reported that W. H. Standish of Grand Fork, N. D., is investigating with a view to installing electric-light plant. It is stated he contemplates building a power plant in the city to be driven by the water-power of White river by means of tunnels providing a waterfall.

Fort Smith, Ark.—Pipe Line.—General Pipe Line Co., reported incorporated November 1 with \$10,000 capital stock, will pipe gas, oil and water. A. D. Lord is president and engineer in charge; C. Van Sickle, vice-president, and James Brizzolara, secretary.*

Jonesboro, Ark.—Bakery.—P. M. Latourette will erect two-story brick building, equipping as bakery. About \$4000 will be invested. H. A. Lesmeister is architect. It is proposed to install one dough mixer with capacity of two or two and one-half barrels of flour; also a patent oven; principal address, 301 Main street.*

Little Rock, Ark.—Lumber Mill.—A. J. Niemeyer Lumber Co., A. J. Niemeyer of St. Louis, Mo., president, has purchased 80,000 acres of land in Pulaski, Perry and Saline counties at \$1,000,000. The land is heavily timbered, and it is proposed to establish a lumber mill three miles from Little Rock for its development. A standard-gauge railroad 17 miles long will be built and will eventually connect with the Rock Island at Ola.

Lonoke, Ark.—Street Paving.—Sumption Paving Co. of Fayetteville, Ark., has con-

tract for laying 40 blocks of concrete pavement amounting to \$7000.

FLORIDA.

Gainesville, Fla.—Phosphate Mining.—Reported that the Albion Mining & Manufacturing Co., P. D. Camp, president, has arranged for the issuance of \$250,000 of bonds for the further development of phosphate lands in Alachua county.

Jacksonville, Fla.—Road Building.—Southern Fuel & Supply Co. is lowest bidder at 68 acres a square yard for repairing and re-building the rock road.

Miami, Fla.—Railroad Shops.—Florida East Coast Railroad will erect small blacksmith and machine shops for Key West extension repair work (previously mentioned). J. R. Parrott, St. Augustine, Fla., is general manager.

Punta Gorda, Fla.—Ice and Cold-storage Plant, etc.—Reported that E. B. Cornell of Philadelphia, Pa., has purchased the plant of the Consolidated Ice Manufacturing, Refrigerating & Fish Co. at \$71,500, and will organize company for its operation.

Vereen, Fla.—Sawmill, etc.—Tallahassee Sawmill Co., which is a subsidiary of J. L. Phillips & Co., Thomasville, Ga., has purchased the timber lands and sawmill plant of the Jackson Bros. Lumber Co. and will continue to operate and develop same. No machinery will be required.

GEORGIA.

Atlanta, Ga.—Railroad Devices.—Hicks Improved Engine Brake Co. has been incorporated with \$35,000 capital stock by J. A. Hicks, F. O. Walsh and F. H. Hill to manufacture fixtures, machinery and equipment for engines, cars, railroads, etc.

Augusta, Ga.—Cider and Vinegar Factory. William W. Willis, M. W. Phillips and P. C. O'Gorman have incorporated the Willis Cider Co. with \$10,000 capital stock.

Atlanta, Ga.—Electric Generating Motor.—Current Motor Co., reported incorporated October 25 with \$1,000,000 capital stock, will manufacture an electric generating motor to be run by water without erecting dam and to propel a dynamo without the use of engine, invented by John H. Tolson, 328 Prudential Building (one of the incorporators). Other electric appliances will also be manufactured.

Atlanta, Ga.—Steel Bridges.—Roanoke Bridge Co., Roanoke, Va., has contract at \$12,850 for building bridge at Johnson's Ferry, and Austin Bros. of Atlanta at \$15,000 for bridge at Powers' Ferry, both spanning the Chattahoochee river. (Mentioned October 11).

Atlanta, Ga.—Land Improvement.—Incorporated: Selig Realty Co. with \$50,000 capital stock and privilege of increasing to \$200,000; incorporators, Sigmund Selig and Simon S. Selig, Jr.

Atlanta, Ga.—Furniture Company.—Robinson-Martin Furniture Co. has been incorporated with \$7000 capital stock by Charles S. Robinson, H. A. Martin, Mrs. Maude G. Martin and Mrs. M. M. Robison.

Atlanta, Ga.—Gas and Electric Supplies.—W. E. Carter, E. Q. Kennedy, F. A. Hoyt and F. P. Provost have incorporated the W. E. Carter Electric Co. with \$5000 capital stock to manufacture and sell gas and electric supplies.

Bainbridge, Ga.—Sewerage System.—Bosler & Flynn, Chattanooga, Tenn., have contract for constructing sewerage system previously referred to; contract price \$31,290.

Brunswick, Ga.—Water-works and Electric-light Plant.—City is reported as considering the purchase of local water-works and electric-light plant. Address The Mayor.

Brunswick, Ga.—Power-house.—Bowen & Thomas have contract to erect power-house at the terminals of the Atlanta, Birmingham & Atlantic Railroad. The contract was let by the Fore River Shipbuilding Co., Quincy, Mass., which has the contract for building terminals; cost \$35,000. (Referred to October 4.)

Columbus, Ga.—Electric Power.—Reported that Home Mixture Guano Co. has contracted with Columbus Power Co. to furnish electricity for operating machinery, displacing steam power now in use. It is estimated that between 300 and 400 horse-power will be used.

Dublin, Ga.—Sash, Door and Blind Factory. Laurens Lumber Co. has been organized with \$25,000 capital stock by J. H. Beach, S. H.

Fuller, William Bales, B. M. Grier, R. A. Johnson and associates to manufacture sash, doors and blinds. Building has been secured and machinery will be installed at once.

Elberton, Ga.—Granite Quarry.—Swift Granite Co., reported November 8 as having purchased granite properties near Elberton for development, will install a \$35,000 plant. Thomas M. Swift is president; T. M. Swift, Jr., treasurer, and Lamar Ethridge, superintendent.*

Macon, Ga.—Lumber Plant.—Massee-Felton Company has contracted for the erection of proposed \$20,000 lumber plant.

Milledgeville, Ga.—Gas Plant.—It is proposed to establish gas plant, and George D. Case can give information.*

Pineora, Ga.—Saw and Shingle Mill.—Carleton Lumber Co., reported incorporated last week, will operate sawmill with a daily capacity of 20,000 feet and shingle mill. Sawmill is being removed from Gooding, Ga., to Pineora. Wm. L. Gignilliat of Savannah, Ga., is president, and D. L. Dixon, general manager.*

Quitman, Ga.—Naval Stores.—De Soto Company is the correct title of company reported incorporated November 8 with \$25,000 capital stock. It is proposed to erect turpentine still, commissary and 30 tenements. About \$15,000 will be invested. (Name changed to the Georgia Pine Co.)

Rockmart, Ga.—Hosiery Mill.—Rockmart Hosiery Mills has been organized with James Long, president; A. E. Beasley, vice-president, and A. H. Graef, secretary. Company will establish plant.

Rome, Ga.—Electric-light and Power Plant. Atilla Cox, Jr., and S. S. Busch of Louisville, Ky., for themselves and associates, have purchased the City Electric Railway Co., including electric-light and power plant. It is estimated that about \$100,000 will be expended in improvements, building a new plant, etc. A 25-year franchise was also included in the purchase.

Roswell, Ga.—Cotton Mills.—Laurel Mills Manufacturing Co. has petitioned for renewal of charter and increase of capital stock from \$55,500 to \$150,000; present equipment 12,600 spindles and 168 looms.

Savannah, Ga.—Land Improvement.—P. W. Meldrim, M. H. Simkins and G. Noble Jones have applied for a charter for the Realty Development Co. with \$15,000 capital stock.

Spring Place, Ga.—Mineral Lands—Chartered: Alyce Mineral Co. with \$400,000 capital stock for the development of mineral lands in Murray county, containing lead, copper, silver and some gold. Concentrating mills for treating the ores will be built. J. G. Sterchi is president; Joe P. Davis, vice-president, and E. C. Gothard, secretary-treasurer, all of Chattanooga, Tenn. Three miles of railroad will be built by the company, connecting with the Louisville & Nashville Railroad.

Tallapoosa, Ga.—Chartered: P. W. Bonner Company with \$2500 capital stock, with privilege of increasing, by W. M. Kelley, H. M. Houk and P. W. Bonner.

Thomasville, Ga.—Ice and Cold-storage Plant.—Thomasville Ice Co., Albert M. Dixon, manager, will increase capacity of ice plant from 25 to 75 tons daily; will also build a 1000-ton cold-storage room.*

Tifton, Ga.—Fertilizer Factory.—J. M. Price, W. S. Cobb, S. N. Pool and R. E. Dinsmore have incorporated the Tifton Fertilizer Co. with \$10,000 capital stock.

Tifton, Ga.—Sawmill, Shingle Mill, etc.—South Georgia Pine Co. has been incorporated with \$15,000 capital stock by D. A. Blue, B. Middle Hood, R. E. Plowden and J. E. Plowden. It is proposed to operate sawmills, planing mills, shingle mills, lath mills, etc.

Valdosta, Ga.—Buggy Factory.—South Georgia Buggy Co. is completing arrangements for the erection of two-story factory building 200 feet long, which will be equipped for increasing the capacity. Company was reported October 4 as increasing capital stock and enlarging output.

Vidalia, Ga.—Water-works and Electric-light Plant.—City has voted affirmatively the \$14,000 water-works and \$3000 electric-light bonds reported October 11. Address The Mayor.

KENTUCKY.

Barbourville, Ky.—Coal Mines.—James D. Black, James M. Gilbert and John R. Bailey are the incorporators of the Richland-Jellico Coal Co., reported organized October 25 for

the development of coal properties in Knox county; capital stock \$15,000.

Frankfort, Ky.—Electric-power Plant.—State Prison Commission has contracted with Joseph McWilliams & Co. at \$14,200 for the installation of an electric-power plant at the State Penitentiary.

Lee County, Ky.—Coal Mines.—Reported that Charles J. Bronston of Lexington, Ky., and associates have purchased 5000 acres of coal land in Lee county for development.

Lexington, Ky.—Grain Elevator and Flour Mill.—The organization of a stock company to erect an elevator and flour mill to be operated independently of the Central Kentucky Millers' Association is being considered by the Fayette County Farmers' Club, Thomas Adams of Chilesburg, Ky., being the principal promoter.

Lexington, Ky.—Mercantile.—Woolfolk-Thompson Dry Goods Co. has been incorporated with \$100,000 capital stock. A five-story building will be erected. W. T. Woolfolk is president; C. L. Thompson, vice-president, both of Lexington, and S. B. Royster of Beard, Ky., secretary-treasurer.

London, Ky.—Water-works.—The \$15,000 bond issue (previously reported) to be voted on for the construction of water-works did not carry. C. R. Baugh is chairman board of trustees.

Louisville, Ky.—Chair Factory.—F. Weikel Chair Co. will erect addition to plant in the spring. Warehouse reported burned at a loss of \$3000 will not be rebuilt.

Louisville, Ky.—Abattoir.—Chartered: Louisville Abattoir Co. with \$30,000 capital stock by John Moran, Edward P. Moran and Eugene A. McCarthy.

Louisville, Ky.—Elevator Company.—Southern Elevator Co. has been incorporated with \$3000 capital stock by William A. Feltman, Godfried Lips and Walter F. Bickel.

Louisville, Ky.—Sewerage System.—City has voted affirmatively the \$4,000,000 sewerage bonds for the construction of sewerage system. (Recently referred to October 18 and November 1.) Peter Lee Atherton is chairman of sewer commission. J. B. F. Breed, 503 Equitable Building, is chief engineer.

Louisville, Ky.—Box Factory.—Bell & Cogeshall Company is reported to rebuild box factory reported burned. G. Wallace Embry is vice-president of the company.

Madisonville, Ky.—Coal Mines.—J. M. Cook, C. C. Cook, William Deal, F. L. Just and D. P. Ford of Meyersdale, Pa., and Ed Black of Confluence, Pa., have purchased coal mine near Madisonville and organized a company with \$175,000 capital stock to operate same.

Middlesboro, Ky.—Coal Mines.—Reported that the Fork Ridge Coal & Coke Co. will make improvements to plant, doubling the present capacity.

Murray, Ky.—Electric-light Plant and Water-works.—City is reported as considering the construction of water-works and electric-light plant. Address The Mayor.

Pike County, Ky.—Coal Mines.—Majestic Collieries Co. reported incorporated November 1 with \$250,000 capital stock, has acquired about 6000 acres of coal land, which will be developed at once, installing four operations and equipping with electric power from one station located midway. From 800 to 1000 horse-power will be required. P. P. Flanagan of Eckman, W. Va., is president and general manager; W. A. Phillips of Ashland, W. Va., vice-president; S. W. Patterson, secretary, and Morris Watts, treasurer.

Richmond, Ky.—Sewerage System.—The \$30,000 bond issue reported October 25 to be voted for the construction of a sanitary (septic) sewer system has been defeated. C. E. Woods is Mayor.

Stephensport, Ky.—Stone Quarry.—John S. Adair and associates are arranging to operate stone quarry.*

Versailles, Ky.—Water-works and Sewerage System.—City will vote on the issuance of \$60,000 of bonds for constructing water-works and sewerage system. Address The Mayor.

Williamsburg, Ky.—Coal Mines.—Reported that W. T. Underwood and associates of Birmingham, Ala., have purchased, will improve and operate the coal mines of the Mt. Morgan Coal Co. It is stated that the capacity will be increased.

Willard, Ky.—Diamond Mines.—Kentucky "Transvaal" Diamond Co. reported incorporated November 8 with \$100,000 capital stock to operate in Carter and Elliott counties, will install equipment amounting to about \$30,000. H. B. Fraley is president; O. H. Burley, secretary, both of Willard, and S. Pearson of Scranton, Pa., is consulting engineer. Rotary pans and general diamond-washing machinery will be required in due course.

Winchester, Ky.—Sewerage System.—City has voted affirmatively the \$40,000 bond issue

referred to September 13 for the construction of sewerage system. J. L. Weber is chairman of sewerage commission.

LOUISIANA.

Bogalusa (not a postoffice), La.—Electric-light Plant, Water-works, Sewerage, Car Repair Shops, etc.—Harvey Murdock, 116 Nassau street, New York, is in charge of the construction of various buildings, etc., being erected by the Great Southern Lumber Co., Ellicott Square, Buffalo, N. Y., which is building a town at Bogalusa, and previously mentioned in this department in this connection. Bids will be taken by Mr. Murdock either for the whole or any part of the following buildings: Passenger station, freight station, hotel, office building, store, warehouse and meat market, hospital, three schools, 12 or 15 of the better class of houses (500 small houses having been erected), ice plant, jail and public bath. Details have not as yet been arranged for the erection of railroad trestle, car and repair shops, roundhouse, water, sewerage and electric-light plants, but they will shortly follow. Contract was reported May 3 as having been let for mill and accompanying buildings, and construction work has commenced.

Crowley, La.—Public Improvements.—City has voted affirmatively the \$100,000 bond issue mentioned October 18 for constructing sewerage, water-works and electric-light plant and erecting school building. Shelby Taylor is Mayor.

Grand Chenier, La.—Dam Construction.—The Rice Irrigation & Improvement Association (main office, Crowley, La.) will repair 50 feet of dam which was damaged by dynamite. About \$20,000 will be expended. H. L. Fisher is engineer in charge. M. Abbott is president, and James L. Wright, secretary of the association; offices, Crowley, La. (Referred to November 1).

Monroe, La.—Ice Plant.—E. C. Whitford has contract to erect \$20,000 addition to ice plant for the Consolidated Ice Co. Company was reported August 23 as to double the present capacity of 100 tons daily.

New Orleans, La.—Drainage.—Barber Asphalt Paving Co. has contract at \$30,361 for subsurface drains on Saratoga, Gallatin, Valence and Hospital streets, and the Central Improvement & Construction Co. at \$20,882 for subsurface drains on Berlin street.

New Orleans, La.—Foundry and Machine Shop.—Crescent Filter & Specialty Co. reported incorporated November 1 with \$50,000 capital stock, will manufacture water filters, operate brass foundry and machine works. It will occupy two three-story and one two-story buildings and will be in operation about November 15. Frank Danneman is president; E. Miller, vice-president; Thomas W. Gorenau, secretary-treasurer and general manager; office, 1062, 1064, 1066 Annunciation street and 61-63 Calloope street.*

New Orleans, La.—Sewerage, Water and Drainage Systems.—City has voted affirmatively the \$8,000,000 bond issue for completing sewerage, water and drainage systems now in process of construction. L. S. Shields, secretary Sewerage and Water Board, 602 Carondelet street, is in charge of the work.

New Orleans, La.—Turpentine and Tar Products.—American Turpentine & Tar Co., Ltd., reported incorporated November 8, will continue an established business. Plant is being enlarged; office, New Basin and Broad street.*

New Orleans, La.—Bakery.—Middleton Baking Co. reported incorporated November 1 with \$100,000 capital stock, will take over and operate the plant of the Peerless Company. It is proposed to improve plant and double the present output of 20,000 loaves of bread daily. Gaines Middleton is president; Frank S. Voris, vice-president, and J. E. Guidry, secretary.

New Orleans, La.—Ice Plant.—Orleans Ice Manufacturing Co. has been incorporated with \$125,000 capital stock by Joseph Vaccaro and associates.

Pineville, La.—Water-works.—Ira W. Sylvester, Alexandria, La., is engineer in charge of the construction of water-works for which \$16,000 is available. W. F. Huddle is Mayor.

Winnfield, La.—Lumber Plant, Sash and Door Factory.—Lands Lumber & Manufacturing Co. reported incorporated November 1, will manufacture lumber, sash and doors, etc. A building 60x66 feet will be erected at once; other buildings will be constructed later. C. H. Elliott is general manager.*

Winnfield, La.—Water-works.—William McIntosh, New Orleans, La. (civil engineer), has been commissioned to furnish plans and estimate the cost of water-works.

MARYLAND.

Annapolis, Md.—Telephone Conduits.—Chesapeake & Potomac Telephone Co. it is

reported, has applied for franchise to use certain streets for laying of conduits; main office, Washington, D. C.

Baltimore, Md.—Chemical Company.—The Weber Chemical Co. has been incorporated with capital of \$10,000 to deal in drugs, chemicals, etc., by Max Perel, 329 East Pratt street; Laura Perel, Jacob Crystal, Rose J. Crystal and Paul Gordon.

Baltimore, Md.—Can Factory.—The Continental Can Co., Syracuse, N. Y., represented by James H. Preston, 230 St. Paul street, Baltimore, Md., has purchased property near Bayview Junction, on Baltimore & Ohio Railroad, and will establish branch can factory. Buildings on the site will be improved and additional buildings erected and modern machinery installed. About 500 hands will be employed.

Baltimore, Md.—Brick Plant.—It is reported that J. S. McLeod of New York and others interested in the Curtis Bay Brick Co. will purchase the plant of the Chesapeake Brick Co. on Curtis bay and will install additional machinery of the McLeod process, giving the plant a capacity of 17,000 bricks per hour. J. R. Gelz is president of the Chesapeake Brick Co.

Baltimore, Md.—Hard-rubber Factory.—It is reported that the Reinforced Hard Rubber Co. of Jersey City, N. J., is contemplating the establishment of its factory in Baltimore. Middendorf, Williams & Co., North and Fayette streets, are interested in the company.

Baltimore, Md.—Brewery.—The Hagen Consumers' Birch Beer Co. has been incorporated with capital of \$50,000 to manufacture and bottle birch beer and other non-alcoholic drinks by Alexander Hagen, 311 South Howard street; Wilhelm Meyer, Wm. J. Johnston, Jesse B. Conway, 212 East Pratt street; John H. Wilson, Ernest Langhamer and Geo. W. Louchet.

Baltimore, Md.—Telephone-exchange Equipment.—The Chesapeake & Potomac Telephone Co. has awarded contracts to the Western Electric Co., Chicago, Ill., for the equipment of its several exchanges with 10,000 additional lines at cost of about \$275,000. The company has also been extending its lines and renewing old cables and making other improvements at a cost of about \$50,000.

Baltimore, Md.—Sewerage System.—The municipal Board of Awards has awarded contract to M. A. Talbot & Co., 415 American Building, Baltimore and South streets, for the construction of about two miles of 12-foot-in-diameter concrete sewers at their bid of \$281,058. This work consists of main outfall sewers, sections 1 and 2, and is part of the complete new sewerage system to be established by the city. The Sewerage Commission, 304 American Building, Calvin W. Hendrick, chief engineer, will supervise the construction.

Baltimore, Md.—Paving.—John C. Leonard, contractor, Wilkens and Union avenues, was the lowest bidder at his bid of \$1.09 per square yard for macadamizing a portion of Massachusetts avenue. Work will be done under the supervision of Commissioners for Opening Streets, J. Arthur Wickham, president, Hoen Building, Lexington and Holliday streets.

Baltimore, Md.—Coffee-roasting Plant.—The Casey Coffee Co., 104 South Gay street, has been incorporated with capital of \$10,000 for the purpose of importing coffee by Henry V. Casey, Regina D. Casey, Joseph B. Casey, Wm. J. Casey and Frank A. Casey.

Catoctin Furnace (not a postoffice), Md.—Iron Mines.—Joseph E. Thropp of Earlston, Pa., reported March 29 as having purchased the Catoctin Furnace property, including mineral and timber lands, will overhaul and repair the machinery preparatory to mining. Very little new equipment will have to be purchased, and bids have already been received for general line of supplies, etc. The property is equipped with washers.

Hagerstown, Md.—Copper Mines.—Reported that the Blue Ridge Real Estate & Development Co. has purchased of H. J. Wolfe of Smithsburg, Md., 198 acres of land lying at the foot of South mountain containing copper deposits.

Hagerstown, Md.—Electric-light Plant.—Hagerstown Spoke & Bending Co. will install electric-light plant of about 250 lights capacity.*

Hyde's, Md.—Cannery and Ice Plant.—F. B. Jenkins Company has been incorporated with \$25,000 capital stock by Frank B. Jenkins of Sherwood, Md.; Jacob P. White, Parkinson Wilson, Ira L. Morningstar and Henry C. Kennard to operate canning factories, manufacture ice, etc.

Lake, Md.—Paper Bleachery.—West Virginia Pulp & Paper Co. has begun the erection of a concrete and steel building in rear of plant to be used for bleaching purposes.

MISSISSIPPI.

Bay St. Louis, Miss.—Steam Bakery.—F. C. Bordages, Sr., has purchased site on which it is stated a steam bakery will be erected.

Brookhaven, Miss.—Saw and Planing Mill and Ice Factory.—Central Lumber Co., reported incorporated last week, will operate saw and planing mill and ice plant. Three or four buildings with composition roof, average size 50x80 feet, will be erected. About \$50,000 will be expended in buildings and equipment. Ice machinery has been purchased. S. E. Moreton is general manager, and A. E. Moreton, architect.*

Kosciusko, Miss.—Cannery.—C. T. Smithson, J. W. Curry and E. W. Meek have organized company with \$11,000 capital stock to establish cannery.

Pascagoula, Miss.—Street Improvements and Sewerage System.—City will issue \$35,000 of bonds for street improvements and constructing sewerage system. Address The Mayor.

Shubuta, Miss.—Lumber Plant, Electric-light and Water Works, etc.—S. G. Blalock of Shubuta, Miss.; John A. Cox, W. A. Spain of Vincennes, Ind., and Augustus Co-burn of Indianapolis, Ind., have purchased the Kaupp Lumber Co., with single-band and gang mill, daily capacity 60,000 feet; planer, two dry-kilns, sheds, 22 dwellings, the plant of Shubuta Light & Water Co. and Shubuta & Southwestern Railroad. The light plant has a capacity of 200 16-candle-power lights, and aside from furnishing lights for the town supplies the company's plants. The lumber plant will continue to operate as the Kaupp Lumber Co., with John A. Cox of Vincennes, Ind., president; Augustus Co-burn of Indianapolis, Ind., vice-president; S. G. Blalock of Shubuta, secretary and manager, and W. A. Spain of Vincennes, Ind., treasurer. (The John A. Cox Lumber Co. of Vincennes, Ind., was reported November 8 as the purchaser, which was erroneous.)*

MISSOURI.

Carthage, Mo.—Sewerage and Street Improvements.—City is arranging for the construction of sewer system requiring about 4500 feet of 8-inch and 10-inch pipe, and bids will probably be ordered called at next meeting of Council, November 12. The paving of about three blocks of street is also said to be contemplated. I. F. Shannon is City Clerk.

Joplin, Mo.—Lead and Zinc Mines and Mills.—Moark-Nemo Consolidated Mining Co., reported incorporated last week with \$200,000 capital stock, will mine lead and zinc and operate a 500-ton concentrating plant. About \$50,000 will be expended; Bendelar & Cook, managers and engineers in charge.*

Joplin, Mo.—Steel Trestle.—Bartlett Steel Co. has contract for the fabrication and erection of steel trestle for the Southwest Missouri Railroad Co. across the Kansas City Southern Railroad tracks on 4th street; to be double track, 1600 feet long, and will have a station on each track connected by stairs to station below on the Kansas City Southern Railroad. Over 500 tons of structural steel and 1500 yards of concrete will be required in the construction. It will be completed by April 1, 1907, and cost over \$50,000.

Joplin, Mo.—Mining.—Chartered: Mercedes Mining Co. with \$100,000 capital stock by John R. Holmes, John H. Cope, C. M. Sheldon and others.

Kansas City, Mo.—Public Improvements.—A special election will be called to vote on a \$2,000,000 bond issue for public improvements. It is proposed to use \$750,000 for water-works, \$400,000 for parks, \$300,000 police; \$25,000, fire department; \$200,000 general hospital; \$100,000, new workhouse and grounds, and \$25,000, paving-repair plant. Address Mayor Beardsley.

Kansas City, Mo.—Foundry.—Sheffield Foundry Co. reported incorporated November 8 with \$20,000 capital stock, will manufacture light and heavy castings, etc. Foundry building will be 125x88 feet. About \$10,000 will be invested in building and equipment. John W. Kipp is president, and John W. Barlow, 621 Worland avenue, is vice-president and engineer in charge. P. Ohles is architect.*

Kansas City, Mo.—Stock Powder.—Columbian Hog & Cattle Powder Co., manufacturers of stock remedies, will erect a brick building 50x127 feet; cost \$25,000; J. O. Hogg, New York Life Building, architect, and Major Drought, Stock Yards Company, engineer in charge.

Kirkwood, Mo.—Street Improvements.—Henry Winter, Jr., has contract at \$3419 for reconstructing Main street. About \$6000 will also be spent in improving Webster avenue.

Moberly, Mo.—Water-works.—Reported that the city has voted \$100,000 of bonds for constructing water-works. Address The Mayor.

MANUFACTURERS' RECORD.

[November 15, 1906.]

Rich Hill, Mo.—Telephone System.—Hickory Hill Telephone Co. has been incorporated by Grant Stine, J. L. Gander, C. F. Kleinberg and others.

Springfield, Mo.—Brick Paving.—J. L. Richardson has contract at \$12,000 for five blocks of brick paving.

St. Joseph, Mo.—Telephone System.—Citizens' Telephone Co. has increased capital stock from \$150,000 to \$1,000,000.

St. Louis, Mo.—Oil and Mining Company.—Oak Ridge Oil & Mining Co. has been incorporated with \$20,000 capital stock by Geo. D. Barnard, Edward T. Eslick and John M. Garrett.

St. Louis, Mo.—Drayage and Warehousing.—Weber Drayage & Warehousing Co. has been incorporated with \$40,000 capital stock by Henry Weber, Edward Weber, Albert Weber and others.

St. Louis, Mo.—Briquetting Machines.—Kline Briquette Co. has been incorporated with \$100,000 capital stock to continue business recently established for the manufacture and sale of briquetting machines and processes. Building has been erected and machinery purchased. M. M. Kline is president; office, 824 Missouri Trust Building.

St. Louis, Mo.—Mining and Milling.—William Bell, William Frickensmidt, B. F. Roberts and others have incorporated the Belle Mining & Milling Co. with \$50,000 capital stock.

St. Louis, Mo.—Tents, Awnings, etc.—H. Wenzel Tent & Duck Co. has been incorporated with \$70,000 capital stock by Herman Wenzel, Martin Wenzel and Leo Rasleur to deal in tents, awnings, etc.

St. Louis, Mo.—Tire-setting Machines.—Mayers Tire-Setter Manufacturing Co. has been incorporated with \$50,000 capital stock by Henry Mayers of St. Louis, S. B. Hunter of Sikeston, Mo.; L. S. Parks, Union City, Tenn., and E. J. Deal of Charleston, Mo., to manufacture machines to set tires.

St. Louis, Mo.—Manufacturing.—Incorporated: Keenan-Lewis Manufacturing Co. with \$10,000 capital stock by Ernest L. Keenan, C. H. Lewis, Thomas C. Lord and others.

NORTH CAROLINA.

Castle, N. C.—Bridge Construction.—Commissioners of New Hanover and Pender counties are considering the construction of a bridge across Northeast river at Castle connecting the two counties, and a committee has been appointed to investigate the cost, etc. Address County Commissioners New Hanover county, Wilmington, N. C.

Charlotte, N. C.—Showcase Factory.—Cochrane Showcase Co. has doubled its capital stock and will increase the capacity of plant. Company also proposes to establish an agency to handle a complete assortment of office and store fixtures, etc. H. M. Wade is treasurer.*

Charlotte, N. C.—Cotton Gin Works.—Fuller Combing Gin Co. has increased capital stock from \$300,000 to \$400,000.

Charlotte, N. C.—Ice Plant.—Consumers' Ice Co. has increased capital stock from \$50,000 to \$100,000.

Fayetteville, N. C.—Land Improvement.—J. L. DeRossett, manager of the Wilmington (N. C.) company which recently secured the property known as Robinson Heights near Fayetteville, is having the land surveyed preparatory to laying out as suburban residence district. It is proposed to divide the tract into building lots, construct granolithic pavements, etc.

Franklin, N. C.—Drug Company.—Incorporated: Crescent Drug Co. with an authorized capital stock of \$10,000 by E. J. Cheatham, A. R. Winston, D. E. Barkley and A. H. Vann.

Gastonia, N. C.—Suit and Skirt Factory.—Yeager-McLean Manufacturing Co. has been incorporated by J. F. Yeager and A. A. McLean to manufacture ladies' suits and skirts. Machinery has been purchased; electricity to be used as motive power furnished by the Spencer Mountain Power Co. An electric elevator will be installed.

Gilkey, N. C.—Water-power Electrical Plant.—C. J. Huss, John H. McDowell and J. A. Glenn, all of Gastonia, N. C., have purchased the water-power on Cove creek six miles from Gilkey, which will be developed. It is estimated that about 1500 horse-power can be obtained. Options have also been secured on water-power on Cedar and Cove creeks which can be developed to furnish 6000 horse-power. A charter has been applied for by the Western North Carolina Power Co. to control and develop the properties.

Greenville, N. C.—Sewerage System.—Contract will be let December 6 for constructing sewerage system referred to October 25.

Frank M. Wooten is Mayor; J. L. Ludlow, Winston, N. C., engineer in charge.*

Lagrange, N. C.—Telephone System.—Carolina Telegraph & Telephone Co. of Tarboro, N. C., will install telephone system.

Lenoir, N. C.—Buggy Factory.—Lenoir Buggy Co. has been incorporated with \$50,000 capital stock by L. H. Coffey, J. F. Cook and J. R. Bondmore; building already erected.*

Lexington, N. C.—Furniture Company.—Lexington Furniture Co. has been incorporated with \$4000 capital stock and privilege of increasing to \$50,000 by A. C. Harris, W. F. Tussey and W. F. Topp.

Lumberton, N. C.—Land Improvement.—Chartered: Atlantic Improvement Co., with \$150,000 capital stock, by J. F. Armfield, H. Townsend and W. D. Armfield, to develop timber and trucking lands, reclaim swamp lands, etc.

Maxton, N. C.—Cottonseed-oil Mill.—Elba Manufacturing Co. is completing arrangements for the establishment of proposed cottonseed-oil mill; capacity 100 tons daily.

Monroe, N. C.—Sawmill and Brick Works.—Helms-Keziah Company, reported incorporated November 8 with \$20,000 capital stock, will operate sawmill with a daily capacity of 10,000 feet and brick plant with a weekly output of 200,000.

Rosemary, N. C.—Textile Mill.—The Transylvania Company has been incorporated with an authorized capital stock of \$50,000. It will operate 16 looms and accompanying machinery on the manufacture of fancy shirtings and towels. Plant is completed; E. E. Bowen, president; L. S. Carman, secretary-treasurer.

Salisbury, N. C.—Land Improvement.—Norwood-Welch Company has been incorporated with \$20,000 capital stock by N. B. McCandless and J. D. Norwood.

Southport, N. C.—Steamboat Company.—Brunswick Transportation Co. has been incorporated with \$30,000 capital stock by W. A. Moore, John R. McCracken, Duncan I. Watson and associates to operate steamboats, steamships, etc., on the Cape Fear river.

Statesville, N. C.—Knitting Mill.—Bradford Knitting Mills, reported organized last May, has decided to install 50 knitting machines and accompanying dyehouse, both steam and electricity to be used for power. Authorized capital stock is \$100,000, and \$25,000 is understood to have been paid in. Construction of buildings began recently. Eugene Morrison is president.

Wilmington, N. C.—Bottling Works.—Walter Williamson, William M. Bellamy of Wilmington and L. L. Brinson of Newberne, N. C., have incorporated the Pepsi-Cola Bottling Co. with \$15,000 capital stock.

Winston-Salem, N. C.—Shoe Factory.—Jenkins Bros. Shoe Co. has secured five-story factory building 50x100 feet, with three-story frame addition 30x50 feet, and will install machinery for the manufacture of shoes, increasing present capacity.

SOUTH CAROLINA.

Bolton, S. C.—Water-works.—The holding of an election to consider installing water-works is being considered. Address The Mayor.

Branchville, S. C.—Cotton Gin.—Incorporated: Branchville System Ginnery, with \$8000 capital stock. W. M. Warren is president; S. Bird, vice-president, and J. M. Tucker, treasurer.

Charleston, S. C.—Ice Plant.—Consumers' Ice Co. has increased capital stock from \$50,000 to \$100,000.

Columbia, S. C.—Street Paving.—City will expend \$100,000 in street paving. R. C. Keen is chairman of street committee.*

Fort Mill, S. C.—Steel Bridge.—Lancaster and York counties are arranging for the construction of a steel bridge over Sugar creek, two miles distant, connecting the two counties. It is proposed to construct a bridge 400 feet long with approaches, and two steel spans of 75 feet each will be used in crossing the creek proper. Offers for material will be considered by M. C. Gardner, supervisor of Lancaster county, Lancaster, S. C., and T. W. Boyd, supervisor of York county, Yorkville, S. C.

Greenville, S. C.—Bridge Construction.—The rebuilding of steel bridge that spans the Reedy river connecting the east and west sides of the city is being considered by the City Council and the Greenville Electric Railway Co., to cost \$15,000. Address The City Clerk.

Lake City, S. C.—Acetylene-gas Plant.—Town is considering establishing acetylene-gas plant for lighting streets. H. L. Richey is Treasurer.*

Manning, S. C.—Knitting Mill.—Rumored

that Scott Harvin will establish a knitting mill.

Pickens, S. C.—Land Improvement.—Pickens Realty Co. has been incorporated with \$7000 capital stock by J. McD. Bruce of Pickens, B. A. Haggard and George S. LaGare of Charleston, S. C.

Roebuck, S. C.—Woodworking Plant.—Switzer Wood Manufacturing Co. has been incorporated with \$10,000 capital stock by D. W. Switzer, J. L. Foster, C. O. Landford and P. T. Switzer to manufacture coffins, beehives, soda-water crates, etc.

Rosemary, S. C.—Sand-lime Brick Plant.—George W. Bell and C. W. Sykes have formed a company to establish plant for the manufacture of sand and cement bricks; daily capacity 2500.

Union, S. C.—Electric-light Plant.—Reported that Stanley G. I. Electric Manufacturing Co. has contract to furnish equipment for electric-light plant; cost \$11,000.

TENNESSEE.

Athens, Tenn.—Hosiery Mills.—The Athens Hosiery Mills will at once arrange to rebuild its oxidizing-room, chemical-room, boiler and engine-room and replace a portion of dye machinery burned last week. Contract will probably be let to local contractor.*

Chattanooga, Tenn.—Hardware.—Magill Hardware Co. has increased capital stock from \$22,500 to \$45,000.

Chattanooga, Tenn.—Machine Shop.—Street Bros. Machine Works, reported incorporated last week with \$35,000 capital stock, will continue an established business. The company has begun the erection of a new plant for increasing the capacity, and contract for the steelwork has been let to the Converse Bridge Co. J. H. Street is president and manager; Z. W. Whalen, vice-president; C. H. Huston, secretary-treasurer, and J. P. Street, general superintendent. In addition to the present repair work and regrinding and recorragating flour-mill rolls, equipment will be installed to build a complete line of sifting and stave machinery.

Covington, Tenn.—Land Improvement.—Idaville Land Co. has been incorporated with \$60,000 capital stock by John G. McCain, J. M. Cobbs, W. F. Bringle, J. C. Boals, Dr. G. W. Brown and associates.

Cumberland County, Tenn.—Land Development.—J. H. Whalen of Louisville, Ky., states he is not interested in the Newman Land & Coal Co. reported organized November 8 to develop coal land in Cumberland and White counties.

Grundy County, Tenn.—Timber Land.—Ardery & Edwards of Paris, Ky., have purchased a large tract of timber land in Grundy county which will probably be developed.

Huntington, Tenn.—Cannery.—The organization of company with \$5000 capital stock to establish cannery factory is being considered. The Commercial Club, W. L. Noell, secretary, is promoting the enterprise.*

Jackson, Tenn.—Bank, Store, Office and Church Fixtures.—Budde-Lindsay Manufacturing Co., reported incorporated November 8 with \$30,000 capital stock to manufacture bank, store, office and church fixtures, will erect a two-story brick building 60x140 feet. About \$25,000 will be invested in building and equipment; R. A. Heavener and H. T. McGee, architects.*

Knoxville, Tenn.—Hardwood Fixtures.—Knoxville Hardwood Fixture Co., reported incorporated November 8 with \$10,000 capital stock, will deal in toilet tanks, toilet seats and hardwood fixtures. Building has been secured. Noble Smithson is president and general manager; P. O. Box 423.*

Knoxville, Tenn.—Railroad Shops.—Borchers, Wardrop & Co. have contract to build woodworking and paint shops for the Southern Railway near Knoxville. About \$200,000 will be invested. (Referred to last week.)

Knoxville, Tenn.—Fertilizer Factory.—Reported that Thomas C. Jeffries of Columbus, Ohio, is considering the establishment of \$200,000 fertilizer factory.

Memphis, Tenn.—Ice-cream Factory.—Blue Seal Ice Cream Co. has amended charter, changing name to the Blue Seal Manufacturing Co. and increasing capital stock from \$10,000 to \$25,000.

Memphis, Tenn.—Cotton-bag Mill.—American Bag Co., reported organized in September with a capital stock of \$250,000, has awarded contract to the Selden-Breck Construction Co., Fullerton Building, St. Louis, Mo., for erection of buildings for plant. The main structure to be three stories high, 180x400 feet, divided in the rear into two long wings; concrete construction. The American Bag Co. was previously reported as to establish plant for manufacturing cotton and burlap bags and later to manufacture its own cloth.

Memphis, Tenn.—Dyeing and Cleaning Plant.—L. M. Weathers & Co. have taken bids for the erection of dyeing and cleaning plant reported November 1 to be erected by Kraus Bros.; two stories, 50x148½ feet; brick; rear portion to be dynamite-proof.

Nashville, Tenn.—Peanut-cleaning Plant.—A company has been incorporated with \$60,000 capital stock by J. S. Cooley, H. C. Scruggs, A. E. Potter, L. B. Todd and Nathan Anderson to take over and operate the peanut-cleaning, grading and shelling plant of J. S. Cooley & Co. Later it is proposed by the new company to erect a warehouse.

Nashville, Tenn.—Water-works Extensions.—City will request of the next Legislature authority to issue \$200,000 in bonds. Plans are being made for the extension of water-works system to cost approximately \$1,500,000; W. W. Southgate, City Engineer.

Nashville, Tenn.—Buggy Factory.—DeFord Buggy Co., recently organized to establish plant for the manufacture of buggies having a daily capacity of 40, has begun the erection of building. Latter will cover an acre of ground. Buildings will be metallic sheathed and cost \$12,000. L. E. Posther will be general superintendent; office, 1146 Broad street.

Rockwood, Tenn.—Bottling Works and Ice Plant.—W. S. Kelly and Robert H. Thompson will establish bottling works and ice plant. Bottling works will be removed from Mt. Sterling, Ky., where plant is now in operation.

Tulahoma, Tenn.—Wagon Materials.—Wagon Stock Lumber Co., reported incorporated August 9 to manufacture axles, tongues, bolsters, sawed felloes, etc., has completed organization with W. R. Campbell, Jr., president; J. L. Dunn, treasurer, and J. E. Brantley, secretary and manager; plant now in operation; capital stock \$5000.

TEXAS.

Alba, Texas—Beverage Factory.—Orange Mash Co. has been incorporated with \$10,000 capital stock to manufacture orange mash (a beverage). F. N. Hopkins is president; Will Craver, vice-president, and P. A. Scovel, secretary-treasurer and manager; main office, Dallas, Texas.

Austin, Texas—Incorporated: Stacy-Robbins-Cover Company with \$50,000 capital stock by William H. Stacy, John W. Robbins and R. Brown Robbins.

Ballinger, Texas—Ice and Cold-storage Plant.—W. J. Miller and G. M. Vaughn contemplate organizing stock company to erect and operate a 40-ton ice and cold-storage plant; mentioned recently.*

Beaumont, Texas—Sawmills.—Nona Mills Co. has increased capital stock from \$100,000 to \$200,000.

Beaumont, Texas—Public Improvements.—City is reported as considering the issuance of \$50,000 park bonds. Address The Mayor.

Caldwell, Texas—Water-works.—City has purchased local water-works plant and will make improvements, installing new boiler and pump and constructing a 50,000-gallon tank 60 feet high for storage purposes. J. A. Gray is Mayor and chairman of Water-works Commission.

Comanche, Texas—Cottonseed-oil Mill and Cotton Gin.—Comanche Cotton Oil Co., reported organized last week as increasing capital stock from \$75,000 to \$100,000, is taking over five large gin plants belonging to Bryson & Scott.

Dallas, Texas—Medical Devices.—Chartered: Superba Manufacturing Co. of Dallas, Houston and Fort Worth, Texas, with \$100,000 capital stock by Chas. O. Farrington, Thomas Watson and H. A. Meyer to manufacture medical devices.

Dallas, Texas—Publishing.—Farmers' Educational & Co-operative Union Publishing Co. has been incorporated with \$100,000 capital stock to consolidate the National Co-operator and the Texas Farm Journal. It is proposed to erect a building to cost \$40,000, equipping with large press that will print on book paper from rolls. O. P. Pyle is president and treasurer; Selden R. Williams, vice-president, and Geo. B. Latham, secretary and manager.

Fort Worth, Texas—Drug Company.—Kinney-Clark Drug Co. has been incorporated with \$150,000 capital stock by Kirk D. Holland, H. C. Edrington, L. M. Whitsett, N. Harding, I. M. Burney of Fort Worth, R. W. Kindel and J. F. Clark of Weatherford, Texas.

Houston, Texas—Woodworking Plant.—Texas Tie & Timber Co. has been organized to manufacture railroad ties, piping, telegraph poles and lumber. W. G. Burchfield is manager; office, Commercial Bank Building.*

Houston, Texas—Trunk Factory.—L. A. Freyer will organize company with \$50,000 capital stock for the establishment of trunk factory; daily capacity 100 trunks.

Houston, Texas—Rice Mill.—Couch Rice Milling Co. has been incorporated with \$50,000 capital stock to build a 500-barrel rice mill. A. R. Couch is president; P. K. Fulton, vice-president, and D. R. Jamison, secretary. Mill building will be 100x225 feet. The machinery to be installed was invented by Dr. Couch.

Houston, Texas—Steamboat Company.—A company is being organized with James B. Baker of Waco, Texas, president; C. R. Mitchell of Galveston, Texas, secretary, and J. H. P. Davis of Richmond, Texas, treasurer, to operate a line of passenger and freight steamers on the Brazos river; capital stock \$50,000.

Houston, Texas—Townsite.—Danbury Townsite Co. has been incorporated with \$30,000 capital stock by E. K. Dillingham, W. T. Renn and Sam Lazarus.

Leakey, Texas—Kaolin Mines.—United Kaoling Properties Co., reported November 1 as being organized with \$9,000,000 capital stock, will develop kaolin deposits in Edwards county six miles from Leakey, installing a plant with a daily capacity of 500 tons the first year. Milton Wolf, 111 Fifth avenue, New York, is president; George G. Pryor, vice-president; Wm. E. Bradway, secretary, and Edwin E. Wolf, treasurer; main office, 725-726-727 First National Bank Building, Chicago, Ill.

Port Neches, Texas—Tar Paper Manufacturing.—Reported that the Texas Company, Beaumont, Texas, operating oil refinery, will install plant for the manufacture of tar roofing paper. Machinery has been purchased.

Saratoga, Texas—Oil Wells.—Incorporated: Daley Oil Co., with \$10,000 capital stock, by Charles A. Daley, W. F. Talinferro, John R. Cheek, P. S. Russel and James F. Weed.

Somerville, Texas—Ice Plant.—Somerville Electric Light & Manufacturing Co. is reported to install ice machinery.

Temple, Texas—Gas Plant.—J. J. Busenberg of Chicago, Ill., chief engineer of the Industrial Gas Construction Co. of Chicago, Ill., will supervise improvements contemplated for plant of the Temple Gas Co.

Waco, Texas—Sewerage System.—City is reported to vote on the issuance of bonds for extending sanitary sewer system. Address The Mayor.

VIRGINIA.

Alexandria, Va.—Patent Hangers.—Collapsible Hanger Co. has incorporated with an authorized capital stock of \$100,000 to manufacture a certain patent for hanging dressed meats. M. E. Hill is president and G. P. Sacks secretary.

Arminius Mines (not a postoffice), Va.—Sulphur Mines, etc.—Arminius Chemical Co. has been incorporated with \$10,000 capital stock by F. Kernochan of New York, S. Lee of Montvale, N. J.; G. P. Hill of Ridgewood, N. J.; L. Ward, Nyack, N. J., and G. A. Wingate of Brooklyn, N. Y., to mine sulphur ore, pyrites ore, etc.; offices at 56 Wall street, New York. J. Frederic Kernochan is president.

Christiansburg, Va.—Cannery.—R. H. Pollock Company, 404 St. Paul street, Baltimore, Md., is reported as arranging for the erection of a \$15,000 canning factory.

Clifton Forge, Va.—Ice Plant and Bottling Works.—Clifton Forge Ice and Bottling Works has been incorporated with \$100,000 capital stock to operate ice-plant and bottling works. A building 60x125 feet, engine and boiler room brick, balance frame, will be erected. About \$60,000 will be invested in buildings and equipment. Machinery has been purchased. W. G. Mathews is president, and A. C. Ford, secretary-treasurer. (Referred to October 25.)

Fincastle, Va.—Creamery, Ice Plant, etc.—Botetourt Creamery Co. has been incorporated with \$10,000 capital stock to establish creamery; daily capacity 1000 pounds of butter. It is also proposed to install ice and refrigerating plant. H. G. Breckenridge is president; A. Beckley, secretary-treasurer.*

Lynchburg, Va.—Electric-light Plant.—The time for opening bids for the construction of electric-light plant mentioned November 8 has been extended from November 10 to November 15. Leon Goodman is chairman of committee on electricity; Lamar Lyndon, consulting engineer, 50 William street, New York.*

Mendota, Va.—Telephone System.—Mendota Mutual Telephone Co. has been incorporated with C. O. Johnson, president, and G. W. Hendricks, vice-president.

Norfolk, Va.—Contract will be let December 3 for improving Marshall avenue, Brambleton ward. H. Hodges is chairman Board of Control.*

Norfolk, Va.—Brick Works.—Norfolk Brick Co. has been incorporated with an authorized capital stock of \$125,000. C. W. Fentress

is president; J. T. Lawless, vice-president, and J. E. Wailes, secretary-treasurer.

Norfolk, Va.—Car and Locomotive Works.—Newport Car and Locomotive Works has been incorporated with an authorized capital stock of \$25,000. W. G. Nottingham of Portsmouth, Va., is president, and J. L. Bowen of Norfolk, vice-president.

Norfolk, Va.—Horseshoeing Shop.—Chartered: James Barkley & Co., with an authorized capital stock of \$25,000, to conduct a horseshoeing and blacksmith shop. James Barkley is president; S. Chapman, secretary-treasurer.

Norfolk, Va.—Miniature Railroad.—Incorporated: Exposition Miniature Railroad Co., with T. G. Cagney of Jersey City, N. J., president; F. W. McCullough, secretary, and C. M. Barnett, treasurer, both of Norfolk, Va.; capital stock \$50,000. It is proposed to construct and operate a miniature railroad and other amusements at the Jamestown Exposition.

Norfolk, Va.—Cigarette Factory.—Ware-Kramer Tobacco Co., cigarette manufacturer, is arranging for the erection of six-story building 210x1200 feet to cost \$50,000. Contract has been awarded for 10 cigarette machines and five packing machines. Building will be equipped for manufacturing, packing and storing of cigarettes, and will be constructed of brick and stone with mansard roof. Company was reported April 19 as removing plant from Wilson, N. C., to Norfolk. F. D. Ware is president and general manager.

Norfolk, Va.—Skirt Factory.—J. H. Norton Company, Inc., has been chartered with \$25,000 capital stock and will manufacture ladies' skirts; weekly capacity 50 dozen. A two-story building 60x100 feet has been secured. J. H. Norton is general manager.

Norfolk, Va.—Boulevard.—Boulevard Commission has awarded contract to Mundy Bros. at \$55,300 for constructing that portion of Jamestown Boulevard lying in Norfolk county. The contract includes both the grading and the furnishing of the crushed stone.

Radford, Va.—Iron Pipe Works.—The Lynchburg Foundry Co. of Lynchburg, Va., is operating the Radford Pipe Works, which plant it owns, and has recently installed new machinery, including electric traveling crane of 15 tons capacity, 50-inch lathe, boring mill and other equipment. All contracts have been awarded and the new machinery is in position. The Radford Pipe Works was recently erroneously reported as operated by another company.

Radford, Va.—Water-power Electrical Plant.—Vaughan Construction Co., Vaughan Building, Roanoke, Va., is completing arrangements for the purchase of the plant of the Radford Water-power Co., and extensive improvements are planned. It is proposed to improve water-works and lighting system in conjunction with an extension of car lines.*

Richardsville, Va.—Lumber Plant.—Incorporated: Beals Lumber & Improvement Co., with W. H. Beals, president; M. L. Johnson, secretary; authorized capital stock \$25,000.

Richmond, Va.—Ice and Cold-storage Plant.—Merchants' Cold Storage & Ice Manufacturing Co., previously organized with Joseph Stumpf, president; Phil Kelly, vice-president, and E. A. Stumpf, secretary-treasurer and general manager, to establish ice and cold-storage plant, has completed arrangements and let contract for the erection of building to be five stories, 71x131 feet, affording 350,000 cubic feet of storage space; cost \$125,000. The principal work will be of brick and concrete, while the walls will be made airtight and temperature proof by an insulation of compressed sheet cork. A complete system of cold storage plumbing will be installed, making water available wherever desired, and the building will be electric lighted. Two electric elevators (Ots) will be included in equipment. Widmann & Walsh prepared the plans, and Carl Ruehrmund of Richmond is supervising architect. The contract has been awarded to Contractor Sievers. The company has a capital stock of \$200,000.

Richmond, Va.—Land Improvement.—Incorporated: Interstate Suburban Realty Corporation, with \$15,000 capital stock. D. R. Creecy, Jr., is president, and L. E. Harry, secretary-treasurer.

Roanoke, Va.—Sewerage System.—City will let contract November 19 for constructing sewers in Woodland Park; W. E. Thomas, Clerk.*

Vesuvius, Va.—Manganese Mines.—The Manganese Corporation of Virginia is completing arrangements for mining and shipping ore from its mines; daily capacity 25 to 30 tons. A new double-compartment hoisting shaft has been sunk and the top works have been rearranged; Edgar C. Moxham, mining engineer, of New York, in charge of operations.

WEST VIRGINIA.

Central City, W. Va.—Transportation Company.—Central Wharf & Ferry Co. has been incorporated with \$25,000 capital stock by J. E. Matthews, Ellis C. Mace of Central City, J. C. Carter, R. E. Vickery and G. N. Biggs of Huntington, W. Va., to operate vessels and barges for transportation across the Ohio river between Central City and Lawrence county, Ohio.

Charleston, W. Va.—Coal Mining.—Incorporated: Davis Creek Mining Co., with \$50,000 capital stock, by Frank H. Alcott of Charleston, Fred B. Lott, Minnie L. Lott of Philadelphia, Pa.; J. C. Huelling of Moorestown, N. J., and W. H. Ramsey of Wyncote, Pa.; main office, Philadelphia, Pa.

Charleston, W. Va.—Oil and Gas Wells.—Green Creek Oil & Gas Co. has been incorporated with \$100,000 capital stock by T. C. Hall, John Davidson, Fred Gardner, Grant P. Hall and associates.

Charles Town, W. Va.—Steel Plant.—Baldwin Steel Co. has been incorporated with \$400,000 capital stock by Urban C. Brewer, Buckner Clay, R. S. Spilman, George E. Price and Harrison B. Smith. Plant for the manufacture of high-grade crucible steel is now under construction; previously reported.

Clarksburg, W. Va.—Coal Mines.—Pittsburgh & Fairmont Fuel Co., it is reported, has acquired a 170-acre tract of coal land adjoining its present holdings.

Clendennin, W. Va.—Lumber Plant.—John C. Bowen, S. C. Bowen and Samuel E. Bowen, all of Charleston, W. Va., are organizing company with \$10,000 capital stock to manufacture lumber.

Fenwick, W. Va.—Lumber Company.—Fenwick Lumber Co. has been incorporated with \$50,000 capital stock by James Strong, S. L. Richards, John C. Tenant and Sarah I. Tenant of Wilkes-Barre, Pa., and John E. Jenkins of Kingston, Pa.

Gassaway, W. Va.—Public Improvements.—Reported that \$30,000 improvement bonds will be issued. W. H. Funk is Mayor.

Kirkwood, W. Va.—Sewerage System.—Reported that the city will extend sewerage system. Address The Mayor.

Marlinton, W. Va.—Telephone and Telegraph Poles.—Appalachian Pole Co. has been organized with E. M. Arbogast, president; J. Ed Arbogast, secretary-treasurer, and A. W. Arbogast, general manager. The company will buy and sell telegraph, telephone and trolley-line poles.

Parkersburg, W. Va.—Oil and Gas Wells.—Hood Oil & Gas Co. has been incorporated with \$10,000 capital stock by C. N. Weinberger of Parkersburg, C. E. Swiger, M. Rose, M. P. Dye of Williamson, W. Va., and others.

Parkersburg, W. Va.—Brick Works.—Ohio Valley Brick Co. has been incorporated by O. O. Tolles and associates to take over and operate the plant of the O. O. Tolles Brick Co. It is proposed to make extensive improvements, building new kilns and installing new machinery.

Wheeling, W. Va.—Ice Plant.—Central Ice & Storage Co. is reported to increase the capacity of plant from 50 to 75 tons daily.

Wheeling, W. Va.—Shoe Factory.—It is proposed to establish shoe factory, and Frank McCoy will be manager.

OKLAHOMA TERRITORY.

Bliss, O. T.—Pump Works.—Incorporated: Myers Pump & Manufacturing Co., with \$50,000 capital stock by G. L. Miller, L. Marks of Bliss and W. M. Myers of St. Joseph, Mo.

Guthrie, O. T.—Construction Company.—Quaker Proof Construction Co. has been incorporated with \$5,000,000 capital stock by G. V. Pattison of Guthrie, Alfred T. Koopman and Charles F. Harrison of Chicago, Ill.

Oklahoma City, O. T.—Telephone System.—Chartered: Deep Fork Telephone Co. with \$500 capital stock by J. T. Pierce, C. F. Woodward and N. W. Clark.

Oklahoma City, O. T.—Toilet Preparations.—Princess Toilet Co. has been incorporated with \$25,000 capital stock by W. H. Dutton, Paul Westfall, M. A. Pocock and others.

Oklahoma City, O. T.—Grain Elevators.—Chartered: Capital Grain & Elevator Co. with \$100,000 capital stock by A. E. Stinson of Guthrie, O. T.; D. D. Cottler of Newkirk, O. T.; J. B. Norton of Red Rock, O. T.; J. B. Hutchins and D. J. Donohue of Ponca City, O. T., and W. M. Randels of Enid, O. T., to control elevators at main shipping points on Santa Fe lines in Northern Oklahoma.

Ringwood, O. T.—Telephone and Telegraph System.—Chartered: Ringwood Telephone & Telegraph Co. by E. T. Wales, E. Frazer, P. H. File, F. W. Watson and W. W. Skadden.

Shawnee, O. T.—Sewerage and Water-

works.—City has voted affirmatively the \$135,000 sewer bonds and \$30,000 water-works extension bonds referred to October 25. Address The Mayor.

Shawnee, O. T.—Mining.—Big Channel Mining Co. has been incorporated with \$1,500,000 capital stock by Sidney Roy of Shawnee, Jacob C. Fisher and Irvin H. Gamble of St. Louis, Mo.

Tecumseh, O. T.—Land Improvement.—Incorporated: Oklahoma Town & Colony Co., with \$100,000 capital stock, by J. F. Floyd, W. C. Berry, L. A. Harding, M. H. Tennison and J. W. Saxon.

BURNED.

Baltimore, Md.—Clubhouse of the Catonsville Country Club, Arthur D. Montell, managing director; loss about \$5,000.

Batesburg, S. C.—D. B. Rawl's sawmills, planing mill and lumber yard; loss \$4000.

Bayou Goula, La.—Dugas & Landry's sugar house; loss \$80,000.

Beltou, Texas.—Belton Gin & Cotton Co.'s cotton gin; loss \$10,000.

Bennington, I. T.—Public school building Address Town Clerk.

Burnt Mills, Md.—William E. Shaw's barn and other outbuildings; loss \$6000.

Cole, Md.—Edward T. Kirby's cannery.

Concord, Texas.—M. B. Brazil's cotton gin; loss \$250.

Covington, Ky.—George Gibbs' cotton gin; loss \$500.

Des Arc, Ark.—Des Arc Hoop & Lumber Co.'s plant; loss \$20,000.

El Paso, Texas.—El Paso Foundry and Machine Works damaged \$10,000.

Fitzgerald, Ga.—E. L. Todd's planing mill and dry-kiln; loss \$500.

Guyton, Ga.—J. T. Wells' barn and stables.

Hollywood, Ala.—A. W. and J. W. Darwin's cotton gin; loss \$3000.

Kansas City, Mo.—Harvest King Distilling Co.'s building; loss \$400,000.

Knoxville, Tenn.—East Tennessee Feed Co.'s store, office and warehouse; loss \$30,000.

Knoxville, Tenn.—Bruce Keener's barn; loss \$6000.

Lafayette, La.—Gerac Bros.' warehouse; loss \$2000.

Louisville, Ky.—E. L. Hughes Lumber Co.'s paint shop and warehouse; loss \$30,000.

Louisville, Ky.—Enos & Lee's flour mill; loss \$8000.

Louisville, Ky.—F. Weikel Chair Co.'s storehouse; loss \$3500.

Louisville, Ky.—Bell & Coggeshall's box factory; loss \$75,000.

Lyra, Texas.—Strawn Coal Mining Co.'s hay barn; loss \$2500.

Manown, W. Va.—J. Lloyd Squires' sawmill.

Mobile, Ala.—Hieronymus Bros.' sawmill, planer, dry-kilns and 2,000,000 feet of lumber; loss between \$125,000 and \$150,000. Mobile Hardwood Lumber Co.'s plant; loss \$25,000.

Newborn, Ga.—J. B. Williams & Co.'s cotton gin; loss \$2000.

Prescott, Ariz.—Parker House, owned by Mrs. G. M. Ellis; loss \$8000.

Reliedville, Ga.—Zach Smith Hotel; loss \$4000.

Santuck, S. C.—W. T. Jones' cotton gin; loss \$6000.

Skidmore, Texas.—San Antonio & Aransas Pass Railway's sandhouse; loss \$5000. W. M. Hobbs, San Antonio, Texas, is general manager.

True, Texas.—E. C. Keith's cotton gin; loss \$4000.

Waterton, Ga.—Citizens' Bank; loss \$5000. Joe Steine's building; loss \$15,000. Harper Bros.' building; loss \$12,000.

West Point, Ga.—Darden & Kennedy's cotton warehouse; loss \$5000.

Wilson, N. C.—Thomas S. Kenan's tobacco prize house; loss \$5000; J. N. Sheeley's machine shop and George Walwright's foundry damaged.

Winnfield, La.—Valley Hotel.

Wanted—An Electric-Light Plant.

A correspondent of the Manufacturers' Record writes that he wants to negotiate with any parties who will sell an electric-lighting plant in a town of 10,000 or 12,000 inhabitants or less. Consideration would be given to a municipally-owned plant that was not giving satisfaction. Such a plant would be purchased and be reconstructed and equipped according to the latest ideas. Those who may be in a position to give particulars regarding a plant that can be purchased can address G. H. P., care of Manufacturers' Record.

BUILDING NOTES.

* Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

Adamston, W. Va.—School Building.—Short & Hartley, Shinnston, W. Va., have contract at \$14,820 to erect eight-room school building, exclusive of plumbing, heating and ventilating, which will be placed later. R. F. Mason, Glenn Falls, W. Va., is president of Board of Education of coal district.

Adel, Ga.—Cotton Warehouse.—J. A. J. Parish and M. W. Jones are receiving bids for a cotton warehouse 90x90 feet.

Adel, Ga.—Store Building.—J. L. Parrish has contract to erect four store buildings for A. W. Parrish & Sons.

Adel, Ga.—School Building.—City will vote November 13 on the issuance of \$10,000 of bonds for the erection of school building. Address The Mayor.

Asheville, N. C.—School Buildings.—City has voted affirmatively the \$30,000 bond issue reported October 18 for the erection of school buildings. Address City Clerk.

Atlanta, Ga.—Labor Temple.—Atlanta trades-unions have secured option on site on which to erect a three-story labor temple to cost \$60,000. Address Charles H. Bernhardt, vice-president Federation of Labor.

Atlanta, Ga.—Auditorium-church and Infirmary.—Plans are being prepared for the auditorium-church and infirmary to be erected by the Tabernacle Realty Co., reported incorporated November 8 by Dr. Len G. Broughton and others. The buildings will consist of a church, auditorium and office building combined, with a frontage of 155 feet; eight or ten stories high, with an auditorium in the rear having a seating capacity of 6000; buff brick; cost \$150,000. A smaller lecture hall will have a seating capacity of 2000 people. The infirmary building will be four stories, equipped with modern apparatus and cost \$75,000.

Atlanta, Ga.—Masonic Temple.—The temple to be erected by the Masonic Temple Co., for which plans of Morgan & Dillon were reported last week as adopted, will be four stories, 60x140 feet; probably fireproof; steam heat; electric fixtures; electric elevator; cost \$175,000.

Baltimore, Md.—Dwellings.—David M. Newbold, 322 Equitable Building, Calvert and Fayette streets, has purchased two lots bounded by Pratt, 6th and 7th streets and Claremont avenue, and will erect about 64 two-story brick dwellings on the sites.

Baltimore, Md.—Warehouse.—Salvatore Cascio, 21 South Eutaw street, will erect four-story concrete warehouse 16x80 feet at 34 South Eutaw street.

Baltimore, Md.—Dwelling.—Joseph W. Vallant, 338 North Charles street, has purchased lot at Roland Park and will erect dwelling on the site, which is 100x228 feet.

Baltimore, Md.—Store Building.—Solomon Himmel, 107-115 North Frederick street, has purchased lot at 14 North Gay street and will erect store building on the site, which is 26x132 feet.

Baltimore, Md.—Dwellings.—The Dukeland Park Co., \$40A Equitable Building, Calvert and Fayette streets, will erect 12 two-story brick dwellings at 2800-2822 Dukeland avenue, to cost about \$50,000. Electric wiring and fixtures, sanitary plumbing and steam-heating systems will be installed.

Baltimore, Md.—Storage Warehouse.—Bartlett, Hayward & Co., founders, Pratt, Scott and McHenry streets, will erect two-story brick storage warehouse 59x130 feet, with wing 70x84 feet. Morrow Bros., 218 West Saratoga street, are estimating on construction.

Baltimore, Md.—School Buildings.—Samuel Ready School, North and Harford avenues, will erect school building, hospital and heating and laundry plant; school to be three stories, 51x36 feet; hospital one-story high, 28x58 feet, and heating and laundry plant one story, 28x55 feet. Building will be of brick with marble or stucco trimmings; structural iron and steel; sanitary plumbing. J. H. Miller, 110 Dover street; B. F. Bennett, 123 South Howard street; Henry Smith & Sons Company, 116 South Reister street, and Thomas L. Jones & Son, 410 West Saratoga street, are estimating on the construction; J. E. Sperry, architect, Calvert Building, Fayette and St. Paul streets.

Baltimore, Md.—Dwellings.—John J. and Charles W. Hurst, Calvert Building, Fayette and St. Paul streets, will erect 20 two-story brick buildings on Reisterstown road opposite Druid Hill Park, to cost about \$80,000; George Clothier, Jr., architect, Hoffman Building, 11 East Lexington street.

Baltimore, Md.—Dwellings.—John Hubner, 208 Maryland Telephone Building, Lexington and Courtland streets, has awarded contract to Wm. Collett, 1645 West Lanvale street, for the construction of six two-story brick dwellings on McHenry near Catharine street, to cost about \$8000; Jacob F. Gerwig, architect, Hoffman Building, 11 East Lexington street.

Baltimore, Md.—Office Building.—The board of trustees of the Johns Hopkins University, R. Brent Keyser, president, Keyser Building, German and Calvert streets, will erect two-story office building 27x52 feet at corner South and Water streets, to be occupied by Home Fire Insurance Co., New York.

Baltimore, Md.—Dwelling.—Dallitt H. Wilson, 230 St. Paul street, has awarded contract to Wm. T. Murphy, 908 North Howard street, for general alterations and remodeling three-story dwelling at 940 North Calvert street. Electric wiring and fixtures, sanitary plumbing and steam-heating system will be installed; cost of improvements about \$8000; Simonson & Pietsch, architects, American Building.

Baltimore, Md.—Warehouse.—T. W. Pumphrey, 123 Center Market space, has awarded contract to John S. Moke, Hoffman Building, 11 East Lexington street, for the construction of warehouse on Lombard street near Center Market space; three stories, 20x75 feet; brick with stone trimmings; slag roof; fire doors and shutters; galvanized-iron cornice; sanitary plumbing; hand elevator; cost about \$6000; F. B. Kleffman, architect, 2140 Druid Hill avenue. (Referred to November 8.)

Charleston, S. C.—School Building.—Special committee of the Board of School Commissioners has selected the general plans of A. W. Todd for proposed two-story school building.

Chattanooga, Tenn.—Clubhouse.—The Calumet Club has purchased residence which will be remodeled as clubhouse. Bearden & Foreman are preparing plans. A holding company is being organized with \$20,000 capital stock, and Judge McReynolds, temporary president, and A. B. Adams, temporary secretary. It is estimated that between \$5000 and \$6000 will be expended in the improvements.

Clarendon, Va.—School Building.—Geo. E. Harrison, Brandon, Va., is preparing plans for \$6000 high-school building to be erected.

Collins, Miss.—Jail Building.—Covington County Supervisors have adopted plans and specifications for proposed \$10,000 jail building, and bids will be received at the next regular meeting. J. T. Mathison is County Clerk.

Columbia, S. C.—Bank Building.—Columbia Trust Co. is reported to erect bank building on site recently purchased.

Columbus, Ga.—Association Building.—Board of Trustees, L. H. Chappel, chairman, will receive bids until December 4 for the erection of a negro Y. M. C. A. building at \$5000; Freund & Crawford, architects, Vassant Building, 210 East Lexington street.

Day St. Louis, Miss.—School Building.—City will issue \$4000 of bonds for the erection of addition to school building. Address The Mayor.

Boaz, Ala.—College Building.—It is proposed to rebuild seminary located at Boaz recently burned, owned by the Woman's Home Missionary Society, M. E. Church, Mrs. A. D. Elder, local manager. It is proposed to erect a building accommodating about 150 girls to cost between \$15,000 and \$20,000. Architect has not been engaged. J. L. Brasher is president of the college.*

Birmingham, Ala.—Dwelling.—James Weatherly has secured permit for making repairs to residence recently damaged by fire. About \$500 will be expended.

Birmingham, Ala.—Dwelling.—T. J. Hodges has secured permit for the erection of proposed two-story brick-veneer building to cost \$450.

Birmingham, Ala.—Skating Rink.—Southern Skating Auditorium Co. has contracted for the erection of skating rink referred to September 27; one story; brick; cost \$16,000.

Bluefield, W. Va.—Store Building.—Contract will be let at once for building to be erected by the Bluefield Furniture Co. after plans by Holmboe & Lafferty of Bluefield and Clarksburg, W. Va.; five stories, 50x258 feet; common and press brick; cut stone; structural and ornamental iron; steel and wire works; fireproof vault; tin roof; metal ceilings; copper cornice; skylight; tile; hard plaster; gas and electric fixtures; plate and common glass; modern plumbing; steam heat; passenger and freight elevator; cost \$40,000.

Bogalusa (not a postoffice), La.—Buildings. For information regarding passenger station, freight station, hotel, office building, store, warehouse and meat market, jail building, etc., reported last week to be built by the Great Southern Lumber Co., Ellicott Square, Buffalo, N. Y., see construction item under Bogalusa, La.

Bowling Green, Ky.—Skating Rink.—D. B. Dearing has contract to remodel building as skating rink for W. I. Neal of Woodburn, Ky. About \$12,000 will be expended. (Referred to November 1.)

Cameron, W. Va.—School Building.—Town has voted affirmatively the proposed \$35,000 bond issue for school purposes. Address Town Clerk.

Centralia, Mo.—Church.—First Baptist congregation will erect a brick edifice with slate roof to cost \$10,000 replacing structure recently burned. Address The Pastor.

Chattanooga, Tenn.—Freight Depot.—Central of Georgia Railway will erect freight depot; no plans for the building have been made as yet. T. S. Moise, Savannah, Ga., is general manager.

Chattanooga, Tenn.—Hotel.—George Baker Long, the contractor for the hotel to be built by the Stone Fort Land Co. for the Chattanooga Hotel Co., has offices at Chattanooga and Lexington, Ky. (previously reported as of Buffalo, N. Y.) The building will be 12 stories, 123x165.6 feet; steel skeleton; fireproof; heating and ventilating apparatus; four electric elevators and two sidewalk lifts; vacuum cleaning; refrigerating plant; air compressor; electric plant to carry 3000 lights and run elevators; cost \$70,000; mechanical equipment to be designed by Pralton Engineering Co., Rochester Building, Cleveland, Ohio; W. T. Downing, Atlanta, Ga., architect; R. T. Dent, Chattanooga, associate. (Referred to November 8.)

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Chattanooga, Tenn.—Clubhouse.—The Calumet Club has purchased residence which will be remodeled as clubhouse. Bearden & Foreman are preparing plans. A holding company is being organized with \$20,000 capital stock, and Judge McReynolds, temporary president, and A. B. Adams, temporary secretary. It is estimated that between \$5000 and \$6000 will be expended in the improvements.

Clarendon, Va.—School Building.—Geo. E. Harrison, Brandon, Va., is preparing plans for \$6000 high-school building to be erected.

Collins, Miss.—Jail Building.—Covington County Supervisors have adopted plans and specifications for proposed \$10,000 jail building, and bids will be received at the next regular meeting. J. T. Mathison is County Clerk.

Columbia, S. C.—Bank Building.—Columbia Trust Co. is reported to erect bank building on site recently purchased.

Columbus, Ga.—Association Building.—Board of Trustees, L. H. Chappel, chairman, will receive bids until December 4 for the erection of a negro Y. M. C. A. building at \$5000; Freund & Crawford, architects, Vassant Building, 210 East Lexington street.

Florence, Ala.—Depot.—Southern Railway will erect a depot, 30x140 feet, of frame, on site reported purchased last week. Plans are being prepared in office of D. W. Lum, chief engineer, Washington, D. C.

El Paso, Texas—School Buildings.—Independent School District, John H. Harper, secretary, contemplates the erection of two new buildings and additions to three old ones to cost about \$100,000, for which bonds were reported last week to be voted.

Fort Worth, Texas—Dwelling.—Smith & Schenck, Atelier Building, are preparing plans for residence to be erected by E. T. Ambler; two stories; stone veneer; modern plumbing and heating; hardwood floors, etc.

Fort Worth, Texas—Dwelling.—Lusher & Rockett have contract to erect two-story brick residence for Berney Anderson after plans by Holmboe & Lafferty of Dallas, Texas; modern plumbing, heating, etc.; art glass; hardwood floors; mantels; tile; hard plaster; Portland cement, etc., will be used in the construction.

Frederick, Md.—Telephone Exchange.—Parker & Thomas, 1109 Union Trust Building, Baltimore, Md., are preparing plans for telephone exchange reported July 12 to be erected by the Chesapeake & Potomac Telephone Co.; general offices, Washington, D. C.

High Point, N. C.—Building.—J. P. Redding will erect a three-story brick building.

Hillsboro, Texas—Association.—Bids will shortly be asked on the construction of Railay Y. M. C. A. building to cost \$5000. Address J. E. Morris, secretary.

Houston, Texas—Office and Warehouse.—Petroleum Iron Works Co. (main office, Washington, Pa.) will erect small office and storage warehouse. (Company was mentioned above Houston, Texas, November 8 as to erect plant.)

Kansas City, Mo.—Postoffice and Court House Building.—James Knox Taylor, supervising architect, Treasury Department, Washington, D. C., will open bids December 6 for all labor and material for alterations

at the United States postoffice and court house building, in accordance with drawings and specifications, copies of which may be had at this office or at the office of the custodian, Kansas City, Mo., at the discretion of the supervising architect.

Kansas City, Mo.—Flat Building.—C. H. Hyatt has contract to erect building for B. Miller, for which J. H. Martling, 15 West 9th street, was mentioned November 1 as preparing plans; three stories, 50x90 feet; gas heating and lighting; cost \$13,000.

Kansas City, Mo.—School Building.—Forrester-Swenson Construction Co. has contract at \$27,200 for building the foundation story of the Westport High School.

Lafayette, La.—School Buildings.—Murphy-Kramer Construction Co., New Orleans, La., has contract at \$46,000 for the erection of graded school. All bids for primary building were rejected, and the committee has been authorized to readvertise for bids.

Lake Charles, La.—Office Building.—Lake Charles Realty Co. will erect office building 150x136½ feet, equipped with steam or hot-water heating plant, electric elevators, and cost \$200,000. Contract will be let January 1, 1907, and F. D. Meade will supervise the construction; competitive bids wanted from architects and contractors.

Lexington, Ky.—Hotel.—Contract will be let about December 1 for addition reported last week to be erected to the Phoenix Hotel; 85x240 feet; fireproof; steam heat; electric fixtures and elevator; cost \$300,000. Richards, McCarty & Bulford, Columbus, Ohio, prepared the plans. Charles Seelbach is manager.

Louisville, Ky.—School Building.—Bids will be received until November 14 at the office of Charles C. Martin, secretary Louisville School Board, for the erection of a building at the Manual Training High School, as per plans and specifications on file in the office of Thomas & Bohne, architects, Keller Building. Certified check for 5 per cent. of amount of bid must accompany each bid.

Lynchburg, Va.—Jail Building.—The erection of a new jail building or the enlargement of present structure is being considered by the Council Committee on Public Buildings. L. Lazarus is chairman.

Lynchburg, Va.—Hotel.—L. S. Agnor & Son have contract to erect addition to Hotel Carroll, W. W. Lynn, proprietor, for which plans were reported November 1 as being prepared by Aubrey Chesterman.

Martinsburg, W. Va.—Bank, Office and Apartment Building.—Bids will be asked in about two weeks for the construction of bank, office and apartment building for the Old National Bank after plans by Holmboe & Lafferty, Clarksburg, W. Va.; press and common brick; cut stone; steam heat; tin roof; plate and common glass; copper dome; electric fixtures; bells and speaking-tubes; structural and ornamental iron and steel work; bathroom fixtures; marble and tile work; vault work; cost \$20,000.

Martinsville, Va.—Depot.—Reported that the Norfolk & Western Railway will erect passenger and freight depot. C. S. Churchill, Roanoke, Va., is chief engineer.

Mayaville, Ky.—School Building.—City has voted the \$60,000 bonds for the erection of school building referred to September 20. W. L. Thomas is secretary Board of Education.

Memphis, Tenn.—Building.—Jere Toohey will erect a three-story brick building to cost \$50,000.

Memphis, Tenn.—Office Building.—Memphis Builders' Exchange is considering the erection of an eight or ten-story building, to cost about \$200,000.

Memphis, Tenn.—Office Building.—L. M. Weathers & Co. have completed plans for 12-story office building to be erected by E. R. McGill and associates; steel skeleton construction, supplemented by pressed brick walls with stone trimmings; elevators, etc.; cost \$200,000.

Mendenhall, Miss.—Courthouse.—Contract will be let December 4 for the erection of courthouse for Simpson county, for which plans by Andrew J. Bryan, 708 Hennen Building, New Orleans, La., were reported September 12 as adopted. The building will cost \$65,000.

Meridian, Miss.—Masonic Home.—Board of Trustees of the Mississippi Masonic Widows and Orphans' Home have adopted plans by A. J. Krouse for buildings previously reported to be erected.

Mobile, Ala.—Clubhouse.—Athelstan Club is considering making improvements to clubhouse, cost not to exceed \$20,000. L. F. Irwin is secretary.

Newburg, W. Va.—Bank and Office Building.—Holmboe & Lafferty, Clarksburg, W. Va., are preparing plans for bank and office building for the First National Bank; two

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stories, 31x66 feet; press and common brick; cut stone; marble wainscot; concrete floors; composition roof; metal ceilings; cornice and skylight; tile floor in bankroom; plastic ornaments; gas and electric fixtures; plate glass; bathroom fixtures; hot-water heating; vault work, etc.; cost \$7000.

New Orleans, La.—Pythian Temple.—Reported that a four-story Pythian temple, 62x106 feet, of pressed brick, will be erected at a cost of \$50,000 by the colored Pythians; total headquarters 1116 Perdido street.

Newport News, Va.—Piers and Train Shed.—Alsop & Pearce have contract to build passenger terminal piers and train shed for the Chesapeake & Ohio Railroad Co., but have not the contract for depot; one pier to be 40x230 feet, with shed, and one to be 60x473 feet, with covered train shed on same. (Referred to November 8.)

Norfolk, Va.—Office Building.—Construction work will shortly begin on 10-story building to be erected by the Merchants' Realty Corporation, for which E. Tatterson has contract; John Keegan Peebles, architect.

Norfolk, Va.—School Building.—Plans by Edward Overman have been adopted for two-story school building to be erected at Washington and King streets.

Norfolk, Va.—Hotel.—J. N. Linton has begun the construction of proposed three-story frame hotel at Lambert's Point; cost \$7000.

Norfolk, Va.—Steel Building.—Bids will be received until December 11 at the Bureau of Supplies and Accounts, Navy Department, Washington, D. C., for the construction at the naval magazine, St. Julian Creek, Va., of a galvanized-steel storehouse 199.10 feet, with railroad track, fresh-water tank, etc. Copies of plans and specifications can be obtained on application to the ordnance officer, navy-yard, Norfolk, Va. Applications for proposals should refer to Schedule 257. Blank proposals will be furnished on application to the navy pay office, Norfolk, Va., or to the bureau; E. B. Rogers, paymaster-general, U. S. N.

Oakland, Md.—Courthouse.—Garrett county has voted affirmatively the \$75,000 bond issue for the erection of courthouse referred to August 9. Address County Judge.

Ocean View, Va.—Hotel.—John H. Pierce of Norfolk, Va., has contract to erect two-story hotel 40x70 feet for N. B. Joynes of Norfolk, Va.; cost \$10,000.

Oklahoma City, O. T.—Hall Building.—Gross Construction Co. has contract to erect hall building for F. A. Gross, mentioned last week; 100x140 feet; brick and steel; fireproof construction; steam heat; electric fixtures; cost \$30,000.

Okolona, Miss.—Church.—The edifice to be erected by the Methodist Episcopal congregation, W. E. M. Brogan, pastor, referred to October 25, will be constructed of brick; main auditorium 44x46 feet; Sunday-school room 36x44 feet; hot-air or hot-water heating plant; electric fixtures; cost \$11,000 or \$11,500. Contract for the brick work has been let to Sam Tarkington, West Point, Miss. J. P. Stansel, Columbus, Miss., prepared the plans.*

Petersburg, Va.—Warehouse.—Petersburg Storage Co. has been incorporated with \$25,000 authorized capital stock. It will erect a building 188x217 feet 6 inches; mill construction; cost \$25,000. Contract has been let to Benjamin Harrison. David Dunlop is president of the company; W. Gordon McCabe, Jr., vice-president, and E. H. Patteson, secretary-treasurer.*

Port Arthur, Texas.—Bank Building.—W. C. Whitney, Beaumont, Texas, has contract at \$12,181 for improvements and additions to First National Bank.

Portsmouth, Va.—Sunday-school Building.—Plans have been adopted by the Fourth Street Baptist Congregation for proposed two-story Sunday-school building to cost \$12,000. Address The Pastor.

Quinnimont, W. Va.—Hotel.—Quinnimont Land Co. has let contract for the erection of \$30,000 brick and stone hotel. Plans were drawn by Rabenstein & Warne, Charleston, W. Va.

Richmond, Va.—Hotel.—Chartered: Murphy's Hotel with John Murphy, president; John Murphy, Jr., vice-president; Robert E. Murphy, secretary, and James T. Disney, treasurer; capital stock \$600,000 to \$700,000. It is stated that the erection of ten-story hotel with a frontage of 150 feet is being considered; to be absolutely fireproof and contain Russian and Turkish baths, swimming pools, roof gardens, etc. (John Murphy was reported April 26 last as having let contract to A. C. Bedford for the erection of addition to hotel after plans by Charles K. Bryant.)

San Antonio, Texas—Church.—First Presbyterian Church is arranging for the erection of \$50,000 edifice. Address The Pastor.

San Antonio, Texas—Warehouse.—American Mohair Growers' Association has appointed a committee composed of Henry Fink of Leon Springs, Texas, and G. A. Hoerle of Comfort, Texas, to arrange for the erection of warehouse for the storage of mohair.

Sewell's Point, Va.—Exposition Building.—Plans by Rabenstein & Warne, Charleston, W. Va., have been adopted for building to be erected by the State of West Virginia on the Exposition grounds; to be of colonial style and cost about \$20,000. Virgil A. Lewis, Charleston, W. Va., is secretary of the West Virginia Commission to the Jamestown Exposition.

Sewell's Point, Va.—Exposition Building.—Jefferson Myers, Portland, Ore., president of the Oregon Jamestown Exposition, has secured site 150x300 feet on which to erect building, previously mentioned. It will probably be constructed of brick.

Sewell's Point, Va.—Association Building.—Norfolk (Va.) branch of the Young Women's Christian Association of the United States will erect a \$10,000 building on the Jamestown Exposition grounds.

Shreveport, La.—Courthouse.—The enlargement of Caddo county courthouse is being considered. Address County Judge.

Spartanburg, S. C.—Theater.—James T. Harris will erect a theater with four stores connected.*

St. Joseph, Mo.—School Building.—City has voted affirmatively the proposed \$300,000 building bonds. Address The Mayor.

Temple, Texas—Hospital.—Sangulnett & Staats, Fort Worth, Texas, have completed plans for hospital reported October 26 to be erected by the Santa Fe Railway Employees' Association.

Texarkana, Ark.—Fire-department Building.—Plans will shortly be asked for building for fire department. Thos. A. Bremer is Mayor.

Spartanburg, S. C.—Store Building.—Cutting & Co. of Massachusetts have contract to erect building for Montgomery & Crawford; three stories; brick reinforced with steel girders and supports.

Tifton, Ga.—Building.—G. W. Milligan has contract to erect building for E. E. Slack, mentioned last week; 56x100 feet; cement blocks; electric fixtures; cost \$5000.

Tuscaloosa, Ala.—Courthouse.—Tuscaloosa county has voted affirmatively the \$75,000 bond issue reported October 4 for the erection of courthouse. Address County Judge.

Wadesboro, N. C.—Store and Office Building.—L. A. Little has contract to erect building for W. A. Smith, Ansonville, N. C.; three stories, 52x100 feet; brick; electric fixtures; freight elevator; cost \$10,000 to \$12,000.

Washington, D. C.—Clubhouse.—Washington Lodge No. 15, B. P. O. E., 1006 E street N. W., has awarded contract to Brennan Construction Co., foot 31st street N. W., for the excavation for foundations for new clubhouse to be erected on H street between 9th and 10th streets N. W.; Richard O'Brien, chairman building committee; B. Stanley Simmons, architect, 931 F street N. W. Bids on superstructure will be asked in about one week.

Washington, D. C.—Apartment-house.—Dr. Oscar Wilkinson, 1404 L street N. W., has awarded contract to George P. Horton, 550 Steuben street N. W., for the construction of addition to apartment-house at 3333 N street N. W.; three stories; brick with stone trimmings; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost about \$21,000; N. T. Haller Company, architect, Corcoran Building, 15th and F streets N. W.

Washington, D. C.—Dwellings.—Middaugh & Shannon, builders, 2405 1st street N. W., will erect six two-story brick dwellings at 435-445 Park road N. W., to cost about \$21,000; Joseph Bohn, Jr., architect, 215 D street N. W.

Washington, D. C.—Dwellings.—John H. Lloyd, builder, 718 Irving street N. W., will erect 10 two-story brick dwellings at 11th and Spring streets N. W., to cost about \$30,000; N. T. Haller Company, architect, Corcoran Building, 15th and F streets N. W.

Washington, D. C.—Dwellings.—M. Barry Hopper, 1332 New York avenue N. W., has commissioned A. H. Beers, architect, 717 14th street, to prepare plans and specifications for dwelling to be erected on Connecticut avenue terrace; three stories; frame construction with pebble-dash exterior; electric wiring and fixtures; sanitary plumbing; hot-water heating system; cost about \$10,000.

Washington, D. C.—Dwellings.—Harry Wardman, builder, 717 14th street N. W., will erect 26 dwellings at 3524-3574 11th street, nine at 132-148 Quincy place N. E. and five at 1626-1634 Eckington place N. E.; all to be two stories; brick with stone trimmings; sash

roof; sanitary plumbing; hot-air-heating systems; cost about \$125,000; A. H. Beers, architect, 717 14th street N. W.

Washington, D. C.—Dwellings.—James B. Ellerson, 605 14th street N. W., has awarded contract to Wm. E. Pickford, 1410 G street N. W., for the construction of 15 dwellings at 532-560 14th street S. E. and four dwellings at 1408-1414 G street S. E.; all to be two stories; brick with limestone trimmings; tin roofs; sanitary plumbing; hot-air-heating systems; cost about \$40,000; W. J. Simmons, architect, 605 14th street N. W.

Washington, D. C.—Dwelling.—George R. Washington, 30 14th street S. E., has awarded contract to M. H. Herriman, 224 12th street S. E., for the construction of two-story brick dwelling with hot-water-heating system at 2000 Flagler place, to cost about \$5000; Thomas F. Holden, architect, 218 8th street S. W.

Washington, D. C.—Dwellings.—Kate M. Herriman has awarded contract to M. H. Herriman, 224 12th street S. E., for the construction of two two-story brick dwellings with hot-water-heating system at 2004 and 2006 Flagler place, to cost about \$8000; Thomas F. Holden, architect, 218 8th street S. W.

Washington, D. C.—Dwelling.—John R. Dean has commissioned Wm. J. Palmer, architect, Warder Building, 523 9th street N. W., to prepare plans and specifications for dwelling to be erected at Brightwood, D. C.; 2½ stories, 34x36 feet; brick with stone trimmings; electric wiring and fixtures; sanitary plumbing; hot-water-heating system.

Washington, D. C.—Store Building.—Thos. A. Dolyns, 18th street and Columbia road N. W., has awarded contract to W. B. Holtzclaw, 1709 Pennsylvania avenue N. W., for the construction of an addition to store building at corner 18th street and Columbia road N. W.; two stories, 16x32 feet; B. Stanley Simmonds, architect, 931 F street N. W.

Washington, D. C.—Office Building.—The Epiphany Church Home Association, 1319 H street N. W., has commissioned Robert Stead, architect, 906 F street, to prepare plans and specifications for office building to be erected at 1309 G street N. W.; six stories, 33x100 feet; brick with stone trimmings; structural iron and steel; electric wiring and fixtures; sanitary plumbing; steam-heating system; elevator. Bids on construction will be received until November 20.

Washington, D. C.—Dwelling.—George Maca Green has awarded contract to Blue & Smith, Alexandria, Va., for the construction of 2½-story frame dwelling with hot-water-heating system at Braddock Heights, to cost about \$6000; A. M. Schneider, architect, Bond Building, New York avenue and 14th street N. W.

Waycross, Ga.—Association Building.—H. J. Klutbo, Jacksonville, Fla., has prepared plans for building to be erected by the Young Men's Christian Association; three stories, 68x100 feet; semi-fireproof construction; steam or hot-water heating plant; electric and gas fixtures; cost \$30,000. Contract has been let for foundation work.

Waynesville, N. C.—Bank Building.—Commercial Bank, recently organized with R. E. Osborne, president, will erect building.

Webb City, Mo.—Dwelling.—Smith Bros. have contract to erect two-story frame residence 31x43 feet for A. D. Temperton after plans by A. C. Michaelis, Joplin, Mo. J. Hamilton, Joplin, Mo., has contract for plumbing work; cost \$6000.

Webb City, Mo.—Office Building.—Southwest Missouri Electric Railway Co. is having plans prepared by F. W. Caulkin for a four or five-story office building 75x125 feet; brick and stone; nickel plumbing; composition roof; hard plaster; combination-light fixtures; cost \$140,000.

Webb City, Mo.—Telephone Exchange.—A. Allen Co., Joplin, Mo., have completed plans for telephone exchange to be erected by the Home Telephone Co. of Joplin, Mo.; two stories, 30x75 feet; brick and stone; composition roof; nickel plumbing; combination-light fixtures; cost \$100,000.

West Palm Beach, Fla.—Warehouse.—Lake Worth Mercantile Co. will erect one-story warehouse 50x115 feet. W. H. DaCamera is secretary.*

Wilson, N. C.—Office Building.—Carolina Telegraph & Telephone Co. has purchased site on which to erect a three-story brick building 30x100 feet.

Winchester, Va.—Library Building.—Bids have been received for the erection of the John Handley Library building, to cost \$100,000. It is stated that the Mankin Construction Co. of Richmond, Va., is lowest bidder.

Wynne, Ark.—Theater.—R. Block will erect a two-story brick building 65x30 feet, a portion to be equipped as theater.

RAILROAD CONSTRUCTION.

Railways.

Afton, I. T.—The Coffeyville & Memphis Railroad Co. has organized at Oklahoma City to build its proposed line from Coffeyville, Kan., via Centralia and Afton, I. T., to Memphis, Tenn., with a branch to Shawnee, O. T. The officers are: President, J. I. Hill of Coffeyville, Kan.; vice-president, E. H. Lehman of Centralia, Mo.; secretary-treasurer, E. C. Kidroo of Coffeyville, Kan.; solicitor, E. P. Rosser, also of Coffeyville. Others interested are A. J. Yoke of Coffeyville, E. C. Bennett and R. N. Selly, both of Oklahoma City.

Alceville, Ala.—Reported that the Alabama, Tennessee & Northern Railway will extend the Carrollton Short Line 29 miles south. William Toxey is chief engineer at Tuscaloosa, Ala. The Manufacturers' Record is informed that while no immediate extension is proposed, it is rumored that the change of name of the Short Line as above forecasts an extension and improvement. John T. Cochrane of Mobile, Ala., is president.

Americus, Ga.—The Western & Gulf Railroad Co., lately chartered, has subscribed \$1200 to make the preliminary survey for its proposed line to connect Hawkinsville, Americus and Dawson, Ga., with an extension to the Gulf of Mexico from the latter point. Americus will be the headquarters of the company, and a board of managers has been elected as follows: Crawford Wheatley, chairman; D. M. Borum, first vice-chairman; Lee Allen, second vice-chairman; S. A. Pruitt, secretary; G. M. Eldridge, treasurer; J. E. Shepherd, attorney; A. W. Smith, C. C. Hawkins, W. S. Roach, Frank Lanier, J. E. Poole and J. J. Haynes.

Baltimore, Md.—The Baltimore, Frederick & Hagerstown Railway Co. has filed a mortgage in Frederick county to secure \$15,000,000 of bonds providing for the construction of its line from Baltimore to Hagerstown, 90 miles, part of which between Frederick and Hagerstown is already built. Grading machinery is reported to have arrived at Frederick. James E. Ingram, Jr., of Baltimore, is president.

Bellamy, Ala.—The Sumter & Choctaw Railroad of the Allison Lumber Co. has, it is reported, completed and is now operating its line into Whitfield.

Brownwood, Texas.—An official letter to the Manufacturers' Record says that the survey between Coleman and Brownwood is for reduction of grade on the Santa Fe and is not for the projected line from Texico to Brownwood proposed for the Santa Fe and which will be built by the Pecos & Northern Texas Railway Co. This latter line is not yet definitely settled. Mr. Avery Turner is vice-president and general manager of the Pecos Valley lines at Amarillo, Texas.

Camden, Ark.—A movement to secure the building of a railroad from Warren, Ark., via Camden to Hope, Ark., is reported begun by T. J. Gaughan of Camden, and other members of the Board of Trade may also be interested.

Canton, N. C.—The Pigeon River Railway Co. of Canton has been chartered to build the proposed line for the Champion Fiber Co. from Canton 12 miles to the company's works and thence to Pisgah Ridge, 40 miles. Peter G. Thompson of Cincinnati, Ohio, president of the Fiber Company, is the principal stockholder. The others are W. J. Hampton of Canton, N. C., and C. S. Bryant of Asheville, N. C.

Canton, N. C.—Henderson, Ramsey & Co. of Asheville have begun work on their grading contract for the Southern Railway at Canton. It covers the widening of a cut, and 237,000 yards of earth will have to be moved.

Carrizo Springs, Texas.—George B. Jenkins of New York is quoted as saying that he is interested in two proposed railroads, one from Henretta to Archer City, Texas, finally going to Spofford Junction, and the other from Artesia to Carrizo Springs, Texas, but finally to Aransas Pass.

Chattanooga, Tenn.—The incorporation of the Tennessee Gem Coal Co. will, it is reported, result in building a coal railroad to Walden's Ridge. The incorporators are G. H. Holliday and L. U. Davis of Knoxville, Tenn.; R. M. Barton, Jr., Garner Andrews, J. L. Hardin, R. W. Barr and D. T. Clipper of Chattanooga.

Clarendon, Texas.—Reported that the Oklahoma, Texas & Gulf Railroad Co. is being organized to build a line from Clarendon to Nashville, Ark., about 400 miles. The incorporators are F. B. Wildman of Blair, O. T.; E. A. Williams of Roosevelt, O. T.; C. A. Huber of Weatherford, O. T.; R. K. Wooten of Chickasha, I. T.; J. W. Buchanan of Van Buren, Ark.; R. Burge, Felt, P. Both and L. B. Comer of Fort Worth, Texas.

Christiansburg, Va.—Reported that construction will begin shortly for the electric railway of the Montgomery Traction Co. from Christiansburg to Cambria, W. Va., two and one-quarter miles, the route having been located by W. F. Wall of Blacksburg, Va.

Clinchport, Va.—The Virginia & Southwestern Railway has, it is reported, let a contract to the A. H. Jacoby Company, Keystone Building, Pittsburgh, Pa., to build the proposed new line near Clinchport.

Colmesniel, Texas.—Reported that the Missouri, Kansas & Texas Railway is making surveys with a view to connecting its Colmesniel and Trinity line with the rest of the system. J. W. Petheram is chief engineer at Dallas, Texas.

Columbia, S. C.—A. E. Legare of Columbia has, it is reported, made a two-years' contract with the South Carolina Public Service Corporation to do its engineering work, and will shortly begin a survey for the proposed line between Columbia and Charleston. C. R. Van Etten of Brooklyn, N. Y., and others are interested. Mr. Van Etten writes from Orangeburg, S. C., to the Manufacturers' Record that he is engineer in charge of construction and operation. Mr. A. T. Jones is locating engineer. Mr. J. J. Timmes is in charge of financial and legal matters, and Mr. W. W. Wells is in charge of traffic matter. The corporation proposes building approximately 500 miles of railroad to connect the manufacturing towns of the central and northwestern sections of South Carolina with the port of Charleston. It is not yet determined when bids for construction and equipment will be requested; capital \$10,000,000 common stock; no preferred.

Corinth, Miss.—Surveys have been made and right of way and capital, it is reported, have been obtained for the Corinth & Shiloh Electric Railway, about 22 miles long, from Corinth to Shiloh Park, Tenn. J. A. Haines is chief engineer, A. Rubel is president, and the Williams Construction Co. is said to have the contract.

De Soto, Mo.—E. R. Kinsey, chief engineer of the Jefferson Traction Railway Co., 313 Real Estate Building, St. Louis, Mo., is reported as saying that surveys have been made from De Soto to Victoria, Hematite, Festus, Crystal City and Herculaneum. Line will be 20 miles long. William Park of Boston is president.

Emporia, Va.—Reported that the Southern Railway will change the branch from Emporia to Claremont from narrow to standard gauge. W. H. Wells is engineer of construction at Washington, D. C. An official letter to the Manufacturers' Record says that no instructions to change the gauge have been given.

Finchburg, Ala.—W. H. Louisell, president of the Flat Creek Mill Co., Mobile, Ala., is reported as saying that contract will be let immediately to build the proposed line from Finchburg to Peterman, Ala., about 25 miles. J. C. Gross of Finchburg has the contract for another 15-mile section. Sibley Holmes is chief engineer at Finchburg.

Fitzgerald, Ga.—Mr. B. Mobley of Evergreen, Ga., writes the Manufacturers' Record that a company has not yet been incorporated for the proposed railway from the Atlanta, Birmingham & Atlantic Railroad shops, two miles west of Fitzgerald, via Fitzgerald to the Okmulgee river at Mobley Bluff near Evergreen, 18 miles. The company is not yet organized, but about \$6000 are subscribed, and it is expected that the rest of the stock will be taken shortly; capital from \$50,000 to \$75,000.

Floydada, Texas.—Concerning the proposed railroad from Floydada to a point in New Mexico, Mr. W. M. Massie writes the Manufacturers' Record that plans are not complete, but it is proposed to push them through.

Fort Valley, Ga.—About one mile of grade is now reported complete on the Fort Valley & Southland Railroad, which is being built from Fort Valley to Southland, Ga., about 30 miles. The line will reach Miona Springs.

Galveston, Texas.—The Yankton & Southern Railway Co. has been incorporated at Yankton, S. D., to build a line from that city to Galveston, Texas, with headquarters at Cincinnati, Ohio, as well as at Yankton. The stockholders are Robert J. Gamble, W. J. Fanti, Isaac Pile of Yankton, Fremont Hill, Jesse Lowman, Thomas B. Paxton, Alfred Hill, John W. Barrington, William Copes Proctor, Cincinnati, Ohio.

Gulfport, Miss.—The Gulfport & Northwestern Railroad Co. has been incorporated to build the proposed railroad from Poplarville to Gulfport, about 40 miles. The officers are Edward Hines, president; E. F. Barthe, first vice-president; A. McAlpin, second vice-president; F. E. Warehauser, treasurer; E. F. Whele, secretary; S. J.

Cusson, general manager; V. A. Griffith, general attorney.

Gumerry, N. C.—The Northampton & Hertford Railroad, which is to be sold under a decree of court, has built nine miles of its proposed line, altogether to be 45 miles, the section completed being from Gumerry to Jackson, and the entire route from Pleasant Hill to the Chowan river. The Westcott & Trenchard Lumber Co. owns the properties, and W. E. Trenchard is general manager at Gumerry. An extension is expected.

Guthrie, O. T.—The Winnipeg & Galveston Railway Co., which proposes to build a line from Winnipeg, Manitoba, to Galveston, Texas, has amended its charter to increase the capital to \$60,000,000. The directors are A. H. McMahan, Wakita, O. T.; W. M. McGinn, Gibbon, O. T.; W. O. Jones, Watkita, O. T.; J. A. Koontz, Hutchinson, Kan.; T. C. Spaulding and H. V. Goodrich, Kansas City; J. H. Ledgerwood, Denver; Grand Dale, A. G. C. Blierer, Robert Schillberg and B. F. Hegler, Jr., Guthrie, O. T.

Guthrie, O. T.—Engineers are reported to be surveying for a Rock Island extension from Guthrie via Kingfisher and Watonga to Woodward, O. T. J. B. Berry is chief engineer at Chicago.

Irving, Texas.—Reported that the general contractor for the Rock Island cut-off from Irving to Carrollton, 10½ miles, is Lantry & Sharp of Kansas City, Mo., the contract being sublet to McCabe & Steen of Irving, Texas.

Jefferson City, Mo.—Mr. J. W. Mellor writes from Sedalia, Mo., to the Manufacturers' Record that the Missouri Interurban Railroad Co. proposes to build 79 miles of line to connect Sedalia, Smithton, Otterville, Soleville, Bunceton, Prairie Home, Cedron, California, Centertown and Jefferson City. About one-half of the right of way has been secured, but the company will not be ready to begin construction until after January 1. The officers are: J. D. Starke, Soleville, president; J. W. Mellor, Sedalia, vice-president; E. W. Moore, Bunceton, treasurer; C. W. Thomas, Jefferson City, secretary; B. H. Colby, \$12 Security Building, St. Louis, engineer in charge.

Kingwood, W. Va.—The Morgantown & Kingwood Railroad Co. is reported to have let a contract to the Bessemer Contracting & Ballast Co. of Pittsburg and McKeesport, Pa., on the extension of the line near Coon Hollow, W. Va. J. K. Monroe is chief engineer at Kingwood.

Lake Charles, La.—An official letter to the Manufacturers' Record denies the report that a railroad would be built by the Southern Pacific lines from Lake Charles to Alexandria, La. This rumor, it is further stated, has no foundation.

Lexington, Ky.—Mr. Louis Des Cognets, vice-president of the Lexington Railway Co., informs the Manufacturers' Record that the company expects to build the two roads from Lexington to Richmond, Ky., and from Lexington to Winchester, Ky., in the future, but not now.

Little Rock, Ark.—The A. J. Niemeyer Lumber Co., of which A. J. Niemeyer of St. Louis is president, proposes to build 17 miles of standard gauge railroad in connection with its proposed big mill near Little Rock. The line will connect with the Fourche River Valley & Indian Territory Railroad.

Mandeville, La.—N. G. Pearlsall, general manager of the New Orleans Great Northern Railroad, is reported as saying that in a few days contract will be let to build 23 miles of line from Slidell via Mandeville to Abita Springs. On the main line from Slidell northward 51 miles of track have been built, and eight miles have also been built on the Bogue Chitto branch. An official map shows that the line to Mandeville will also go to Covington. The line from Rio to Tyertown, 4½ miles, goes via Franklinton and Warnerton. Another line will be built to Fernwood, and still another from Monticello to Brookhaven. The main line extension from Smith's Ferry is via Rockport and Georgetown to Jackson. The line from Florencia Junction to Folson is 30 miles long.

McAlester, O. T.—Mr. G. Rosenwinkle, secretary of the Sequoyah Development Co., writes the Manufacturers' Record that the company has charge of constructing the proposed Indian Central Railway. Pleasant Porter is president of the company, the other officers besides Mr. Rosenwinkle being John C. Nulk, vice-president, and Ezra Brainerd, Jr., treasurer. A press report says the road proposes to build 460 miles in Indian Territory and Oklahoma, starting at Ponca City and going to Paris, Texas, with a branch line to Oklahoma City. The grade is to be five-eighths of 1 per cent., and the plan is said to have been financed.

Morrison, Tenn.—The Southern Railway is reported to have completed a survey for

double-tracking its line from Morristown to Asheville, N. C., 87 miles, but the work has not yet been authorized. W. H. Wells is engineer of construction at Washington, D. C.

Natalbany, La.—The New Orleans, Natchez & Northern Railway Co. is inviting bids for grading four and one-half miles of its line near Natalbany.

New Orleans, La.—The St. Bernard Traction Co., which proposes to build a line from New Orleans to Bognorouth, eight miles, and to other points, with a total length of 15 miles, has published its charter. William J. Kelly and others are interested.

Palestine, Texas.—H. L. Erisman of Buffalo, N. Y., as chief engineer, recently made a survey for a proposed railroad from Palestine northward to Paris or Greenville, Texas, and also southward from Palestine to the Gulf. He says the line will be built, but declines to name the backers.

Phoebe, Va.—James M. Cumming has been granted a franchise to operate either a steam, electric or gasoline railway from Phoebe to the York-county line, the plan being to build a line from Old Point to Irvington on the Rappahannock river.

Rockland, Texas.—The Burr's Ferry Brownell & Chester Railroad is reported to have completed eight miles of track, and about 72 additional miles will be completed as fast as possible. John H. Kirby of Houston, Texas, is president, and P. G. Omohundro of Rockland, Texas, is chief engineer.

Roscoe, Texas.—An official of the Roscoe, Snyder & Pacific Railway Co. is reported as saying that a grading contract for 30 miles has been let to N. T. Reed of Armour, Texas. The line is to run from Roscoe on the Texas & Pacific Railway northwest via Snyder, Texas, to the New Mexico boundary, about 200 miles, in an almost straight line over level ground; rail contracts also let, delivery to be next April. Marlin Duval is chief engineer at Roscoe, and F. W. James of Abilene, Texas, is president.

Shubuta, Miss.—Mr. S. G. Blalock writes the Manufacturers' Record that the Kaup Lumber Co. plant has been purchased by parties interested in the John A. Cox Lumber Co. of Vincennes, Ind., associated with others. This deal includes the Shubuta & Southwestern Railroad, and an extension of two miles is proposed. John A. Cox of Vincennes, Ind., is president; Augustus Coburn of the Michigan Lumber Co., Indianapolis, Ind., will be vice-president; S. G. Blalock, secretary and manager, and W. A. Spain of Vincennes, treasurer.

Sikeston, Mo.—M. G. Gresham, attorney for the Sikeston & Southeastern Railroad, is quoted as saying that surveys have been made from Sikeston, Mo., to Hickman, Ky., 30 miles, but that construction contracts have not yet been let. J. E. Warner is chief engineer at Benton, Mo., and A. J. Matthews of Sikeston, Mo., is president.

Statesville, N. C.—Bonds for the Statesville Air Line Railroad have carried in four townships of this county, and it is said that new elections will probably be held in the three townships where the bonds failed. Three townships in Yadkin county also voted bonds for the road.

St. Joseph, Mo.—The St. Joseph, Savannah & Northern Railway Co. of St. Joseph has been incorporated to build a line from St. Joseph to Savannah, Mo., 15 miles. The incorporators are T. B. Campbell, F. J. Wheeler, Milton Toole and others of St. Joseph.

Sweetwater, Texas.—Reported that C. W. Post of Battle Creek, Mich., proposes to build a railroad from Sweetwater to reach a tract of land owned by him in Garza county.

Tallulah Falls, Ga.—The Tallulah Falls Railway has, it is reported, built its extension from Dillard, Ga., as far as Prentiss, N. C., 11 miles.

Temple, Texas.—The Gulf, Colorado & Santa Fe Railroad will, it is reported, make improvements at Temple, including the railroad yards, at a total cost of about \$200,000. The San Angelo branch may also be rebuilt. C. F. W. Felt is chief engineer at Galveston, Texas.

Uvalde, Texas.—Mr. Edwin E. Wolf, treasurer of the United Kaolin Properties Co., 726, 727 and 730 First National Bank Building, Chicago, Ill., writes the Manufacturers' Record that the proposed railroad will be known as the Frio Valley Railroad, the line to be 42 miles long to connect Leakey, Texas, with either Uvalde, Sabinal or Chatfield, Texas, on the Southern Pacific. Line is now being surveyed, but the company is not yet ready to ask for bids on the construction and equipment. Officers and directors are not yet chosen for the railroad, because no charter has yet been taken out.

Vinita, I. T.—Mr. S. M. Porter, a director of the company, writes from Caney, Kan.,

to the Manufacturers' Record that the proposed main line of the Arkansas, Oklahoma & Northwestern Railway is to be 160 miles long from Caney, Kan., to Fayetteville, Ark., via Nowata, Vinita and Siloam Springs. Preliminary survey is now being made. The officers are: W. C. Meeker, president; John A. Wettack, vice-president; John A. Orendorff, secretary; J. R. Harris, treasurer; E. B. Lawson, attorney, and B. J. Dalton, chief engineer.

Waterville, N. C.—The Tennessee & North Carolina Railroad has been extended two miles from Waterville to Mount Sterling.

Waycross, Ga.—The Waycross, Baxley & Vidalia Railroad Co. has been granted its charter to build the new railroad, 55 miles long, from Waycross via Baxley to Vidalia, Ga., connecting the Macon, Dublin & Savannah Railway at Vidalia with the Atlantic Coast Line at Waycross. The capital is \$200,000, and the incorporators are W. H. Buchanan, George W. Deen, J. M. Cox, W. R. Beach, Ben G. Parks, John T. Myers, J. S. Bailey of Waycross, C. W. Deen of Baxley, C. G. Edwards of Savannah, J. E. Melton of Blairney, W. T. McArthur and George M. Mathews of Vidalia.

Woodward, O. T.—An official letter from the Atchison, Topeka & Santa Fe Railway to the Manufacturers' Record says that contract has not yet been let for the proposed line from Austin, near Woodward, to Selling, 32 miles, nor can the date of award now be stated. A later report says that the contract has been let to the A. H. Moore Construction Co. of Newton, Kan. Line will be via Moscow, Mutual and Richmond.

Street Railways.

Dallas, Texas.—Reported that the Dallas Electric Corporation has decided to make an extension into South Dallas. G. E. Tripp is president.

Grafton, W. Va.—The Grafton Electric Railway Co. proposes to build an extension two and one-half miles long, and plans are being prepared by S. M. Faust, engineer, at Connellsburg, Pa.

Monroe, La.—The city is reported to have completed financial arrangements to build the proposed extension of its street railway through the Southern suburbs, a distance of three miles.

Nashville, Tenn.—The Nashville Railway & Light Co. stockholders have approved a \$15,000,000 bond issue to redeem existing bonds and to provide for improvements. They also authorized the sale of \$500,000 each of common and preferred stock, the proceeds to be used only for betterments and acquisitions immediately. Percy Warner is president.

Parkersburg, W. Va.—A franchise has been granted to the Parkersburg, Marietta & Interurban Railway to extend its line in Parkersburg.

Richmond, Va.—The proposed line of the Richmond & Henrico Railway Co., lately chartered to take over the Citizens' Rapid Transit Co., is to be four miles long, all in the city of Richmond. The incorporators are W. S. Forbes, president; W. F. Jenkins, vice-president; John C. Hagan, secretary and treasurer; W. P. Forbes, S. L. Kelley, John J. Blake and Edward L. Ryan, all of Richmond.

Rome, Ga.—The Rome City Electric Railway and Lighting Plant has, it is reported, been sold by J. L. Bass to Attilia Cox, Jr., S. S. Bush and others of Louisville, Ky., who will make improvements.

Statesville, N. C.—The Board of Aldermen has granted a street-railway franchise to L. C. Wagner, Isidore Wallace, D. F. Jenkins and others.

Developing Big Water-Power.

The Roberts & Abbott Company of Cleveland, Ohio, is making a minute examination of a large water-power proposition known as the Ox Bow of the Snake river, in Eastern Oregon. The river makes a loop about two and one-quarter miles long, the distance across the loop amounting to but a few hundred feet at the narrowest point. It is proposed to erect a dam 30 feet high at the narrow point and put a tunnel through the neck of the loop, thus getting 22 feet additional fall, making a total drop of 33 feet. Mr. W. H. Abbott of the Roberts & Abbott Company is now in Oregon checking up the measurements and determining the minimum flow of water. It is claimed that in the dry years there will be a flow at extreme low water of 5000 second feet, which would give a minimum power above 25,000 horse-power. The feasibility of transmitting this 140 miles to the various mines in the Seven Devils and Cornucopia country and the towns of Huntington, Weiser, Payette, Ontario and Boise is being considered. This would be one of the largest and longest transmissions of electric energy in the world.

MANUFACTURERS' RECORD.

MACHINERY, PROPOSALS AND SUPPLIES WANTED.

Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted.

Air Compressors.—Swift Granite Co., Elberton, Ga., wants one air compressor 12x12x12 and one air compressor 14x14x14.

Air Compressor.—See "Foundry Equipment."

Air Compressors.—Moark-Nemo Consolidated Mining Co., Joplin, Mo., wants air compressors.

Art Glass.—Rev. W. E. M. Brogan, pastor Methodist Episcopal Church South, Okolona, Miss., wants prices on memorial windows.

Bakery Equipment.—P. M. Latourette, 301 Main street, Jonesboro, Ark., will probably want to purchase one dough mixer with capacity of two or two and one-half barrels of flour and a patent oven (Simpkins preferred).

Baling Press.—H. E. Coleman, care of Commercial Club, Rock Hill, S. C., wants addresses of manufacturers of baling presses for baling waste paper or trash.

Boiler.—See "Engine and Boiler."

Boiler.—Swift Granite Co., Elberton, Ga., wants one 80-horse-power boiler.

Boiler.—See "Engine and Boiler."

Boiler.—See "Engine and Boiler."

Boiler.—Mrs. A. D. Elder, manager Woman's Home Missionary Society M. E. Church, Boaz, Ala., wants prices on boilers for heating laundry, etc.

Boiler.—Macon Brick Co., 353 3d street, Macon, Ga., wants new or second-hand 125 or 150-horse-power boiler. (See "Engine and Boiler.")

Boilers.—See "Engines and Boilers."

Boilers.—R. J. Miller, Ballinger, Texas, wants prices on two 200-horse-power boilers.

Boilers.—Cochrane Showcase Co., H. M. Wade, treasurer, Charlotte, N. C., wants bids on boilers.

Boilers.—See "Engines and Boilers."

Brick.—Benjamin Harrison, Petersburg, Va., wants bids on bricks f. o. b. Petersburg.

Brushes.—A. G. Kiser, Tazewell, Va., wants addresses of manufacturers of hardwood floor-polishing brushes or mops.

Building Equipment and Materials.—James T. Harris, Spartanburg, S. C., wants material and equipment for the erection of theater and four stores.

Cannery Equipment.—W. L. Noell, secretary Commercial Club, Huntington, Tenn., wants information as to cost, equipment, etc., for a modern canning factory.

Cement-block Machinery.—R. W. Mitcham, P. O. Box 312, Camden, S. C., wants prices and catalogues on cement-block machines.

Cement-block Machinery.—Sorshby & Berry, 2113 Third avenue, Birmingham, Ala., wants machinery for making cement blocks.

Church Furniture.—Rev. W. E. M. Brogan, pastor Methodist Episcopal Church South, Okolona, Miss., wants prices on pews and carpets.

Concrete Mixers.—R. W. Mitcham, P. O. Box 312, Camden, S. C., wants prices and catalogues on concrete mixers.

Cranes.—See "Foundry Equipment."

Dry-kiln.—Budde-Lindsay Manufacturing Co., Jackson, Tenn., wants a dry-kiln, about 50,000 feet drying capacity.

Dyeing Equipment.—Athens Hosiery Mills, Athens, Tenn., wants four oxidizing cages, one tom-tom and one chrome machine.

Dry-kiln.—Cochrane Showcase Co., H. M. Wade, treasurer, Charlotte, N. C., wants bids on dry-kilns.

Dry-kilns.—Carleton Lumber Co., Pineora, Ga., wants prices on dry-kilns.

Electrical Equipment.—Athens Hosiery Mills, Athens, Tenn., wants one 7½-kilowatt dynamo and switchboard.

Electrical Equipment.—Vaughan Construction Co., Vaughan Building, Roanoke, Va., will probably want generators and electric equipment.

Electrical Equipment.—Lands Lumber & Manufacturing Co., C. H. Elliott, general manager, Winnfield, La., wants equipment for electric lights.

Electric-light Plant.—The date for opening bids for equipment for electric-light plant at Lynchburg, Va., has been postponed from November 10 to November 15. Address Leon Goodman, chairman of committee on electricity, Krise Building, Lynchburg, Va. Plans and specifications may be seen and proposal forms obtained at office of Lamar Lyndon, consulting engineer, 80 William street, New York.

Electric-light Plant.—Lake Worth Mercantile Co., West Palm Beach, Fla., wants prices on equipment for electric-light plant.

Electric-light Plant.—Hagerstown Spoke & Binding Co., Hagerstown, Md., will shortly be in the market for an electric-light plant of about 250-light capacity. Extra-good second-hand dynamo would answer.

Electric Motor.—Box 411, Memphis, Tenn., wants one five-horse-power electric motor, 220 volts, 60 cycles, single phase; second-hand in good condition.

Elevator.—Budde-Lindsay Manufacturing Co., Jackson, Tenn., wants one two-ton elevator, 15x5 feet, belt power.

Elevator.—Columbian Hog & Cattle Powder Co., Kansas City, Mo., wants freight elevator (Moline).

Engine.—Athens Hosiery Mills, Athens, Tenn., wants small Corliss engine.

Engine.—C. J. Mulkey, Westminster, S. C., wants prices on gasoline engine.

Engine.—S. E. Rice, Apalachicola, Fla., wants to buy second-hand Meitz & Weiss marine oil engine, 50 to 75 horse-power.

Engine and Boiler.—Garber Milling Co., Garber, O. T., wants 140-horse-power Corliss engine and high-pressure boiler.

Engine and Boiler.—Carolina Engineering Co., L. C. Carter, manager, Burlington, N. C., wants engine and boiler. (See "Foundry Equipment.")

Engine and Boiler.—Budde-Lindsay Manufacturing Co., Jackson, Tenn., wants a 100 to 125-horse-power Corliss engine and boiler.

Engine and Boiler.—Macon Brick Co., 353 3d street, Macon, Ga., wants 100 or 125-horse-power engine and 125 or 150-horse-power boiler; new or second-hand.

Engine and Boilers.—Central Lumber Co., Brookhaven, Miss., wants engine and boilers.

Engines and Boilers.—Moark-Nemo Consolidated Mining Co., Joplin, Mo., wants prices on Corliss engines, gas engines, boilers, etc.

Engines and Boilers.—Lands Lumber & Manufacturing Co., C. H. Elliott, general manager, Winnfield, La., wants engines and boilers.

Exhaust System.—Cochrane Showcase Co., H. M. Wade, treasurer, Charlotte, N. C., wants bids on exhaust-pipe system.

Fire Hose.—City of Vicksburg, Miss., B. W. Griffith, Mayor, will receive bids until December 3 for 1000 feet cotton rubber-lined fire hose; usual rights reserved.

Foundry Equipment.—Crescent Filter & Specialty Co., 1062 Annunciation street, New Orleans, La., wants one 60-inch roller to roll No. 8 iron, one 50-inch gap shears with a 15-inch or 18-inch gap for No. 8 iron, one punch for No. 8 iron, one 16-inch-stroke shaper and one milling machine or attachment, all for power drive.

Foundry Equipment.—Carolina Engineering Co., L. C. Carter, manager, Burlington, N. C., wants one heavy 36-inch punch, one cold saw heavy enough to cut a 24-inch beam, one engine and boiler, one small air compressor, one blower, one heavy riveter, one pneumatic reamer, one bending roll, two pneumatic hammers, compressed-air hose, compressed-air hoists, duplex hoists, small cranes, shafting and pulleys.

Foundry Supplies.—Sheffield Foundry Co., John W. Kipp, president, Kansas City, Mo., wants foundry supplies.

Gas Plant.—Geo. D. Case, Milledgeville, Ga., wants information, prices, etc., on acetylene and other gas plants for individual use, lighting a store 20x100 feet.

Gas Plant.—Town of Lake City, S. C., H. L. Richey, treasurer, wants catalogues and prices on equipment for acetylene gas plant.

Gear-cutting Machine.—Wysong & Miles Company, Greensboro, N. C., wants a new or second-hand automatic gear-cutting machine that will cut straight and bevel gears up to 18 inches in diameter.

Granite.—See "Paving Materials."

Grinding Machinery.—V. A. Smith, Artesia, N. M., wants a machine to shred and grind alfalfa hay into a ground feed.

Grinding Mill.—Columbian Hog & Cattle Powder Co., Kansas City, Mo., wants mill

or grinder for grinding damp crystal chemicals.

Heating Apparatus.—Rev. W. E. M. Brogan, pastor Methodist Episcopal Church South, Okolona, Miss., wants prices on hot-air and hot-water heating plants.

Hoisting Engine.—Swift Granite Co., Elberton, Ga., wants one reversible 40-horse-power hoisting engine.

Hoisting Engine.—J. F. Brand, Lithonia, Ga., wants prices on hoisting engines.

Hoisting Equipment.—See "Foundry Equipment."

Ice Machinery.—Thomasville Ice Co., Albert M. Dixon, manager, Thomasville, Ga., wants a 50-ton ice machine.

Ice Plant.—Blacksburg Power & Supply Co., Blacksburg, Va., wants to purchase ice plant.

Ice Plant.—R. J. Miller, Ballinger, Texas, wants prices on equipment for 40-ton ice plant.

Ice Plant.—Botetourt Creamery Co., Fincastle, Va., wants prices on equipment for ice plant for creamery. (See "Refrigerating Machinery.")

Insulating Material.—Thomasville Ice Co., Albert M. Dixon, manager, Thomasville, Ga., wants price on insulation for 1000-ton cold-storage room.

Lead Works.—A. G. Kiser, Tazewell, Va., wants addresses of manufacturers of lead wash weights.

Logging Equipment.—Carleton Lumber Co., Pineora, Ga., wants prices on small skidder outfit.

Lumber.—Walter S. Crawford, R. F. D. No. 3, Hillsboro, N. C., wants addresses of manufacturers and dealers in cedar lumber of different kinds.

Machine Tools.—John F. Riley's Foundry and Machine Works, Charleston, S. C., wants a medium-sized iron planer; second-hand in good condition.

Machine Tools.—Bids will be received at the Bureau of Supplies and Accounts, Navy Department, Washington, D. C., until November 27 for furnishing at the navy-yard, Washington, D. C., two turret lathes and three grinding machines. Applications for proposals should refer to Schedule 242. Blank proposals will be furnished on application to the bureau; H. T. B. Harris, paymaster general, U. S. N.

Machine Tools.—See "Foundry Equipment."

Machine Tools.—D. W. Alderman & Sons Co., Alcolu, S. C., wants a very large radial power drill and a small gear cutting machine, both good second-hand.

Machine Tools.—See "Gear-cutting Machine."

Metal Wheels.—John R. Weatherly, 1320 Fourth National Bank Building, Atlanta, Ga., wants prices on 1000 light-metal wheels for stalk cutters.

Mill Supplies.—Carolina Engineering Co., L. C. Carter, manager, Burlington, N. C., wants shafting and pulleys. (See "Foundry Equipment.")

Miscellaneous Supplies.—Bids will be received until November 30 at office of D. W. Ross, General Purchasing Officer, Isthmian Canal Commission, Washington, D. C., for furnishing by steamer free of charges on dock Colon (Atlantic port) or La Boca (Pacific port), Isthmus of Panama, the following: Locomotive springs, journal bearings, push and hand cars, wagons, jacks, chain blocks, track tools, grindstones, wheelbarrows, crucibles, scrubbing brushes, brooms, torches, lanterns, spikes, screws, rivets, bolts, nuts, nails, horseshoes, stocks and dies, rope clips, saw table, whitewashing machine, valves, pulleys, belt lacing, harness, leather wagon fittings, steel, iron, chain, blacksmith's tools, needles, thread, sash cord, candles, harness dressing, castor oil, shaft compound, pine tar, sea-coal facing, soft soap, welding compound, prussiate of potash, paints, varnish, paint brushes, draftsmen's supplies, filing cases, desks, chairs, etc.

Blank and general information relating to Circular (No. 30) may be obtained at the office of General Purchasing Officer or at offices of assistant purchasing agents, 24 State street, New York; Custom House, New Orleans; 1086 North Point street, San Francisco, and 419 Chamber of Commerce Building, Tacoma, Wash.; also from Chief Quartermaster, Chicago; Depot Quartermaster, St. Louis; Depot Quartermaster, Jeffersonville, Ind.; Chief Quartermaster, Atlanta, Ga., and the Commercial Club, Mobile, Ala.

Railway Equipment.—J. F. Brand, Lithonia, Ga., wants prices on one-half mile 12-pound rails, three-foot-gauge tram rig and three or four dump cars with a capacity for hauling from 4000 to 6000 pounds granite at a load.

Railway Equipment.—S. G. Blalock, manager Kaup Lumber Co., Shubuta, Miss., wants two miles 35 pound relayers No. 1, together with splices, etc., and an 18-ton second-hand road engine, standard gauge.

Railway Equipment (Electric)—Vaughan Construction Co., Vaughan Building, Roanoke, Va., will probably want cars.

Railway Equipment.—Joseph E. Bowen, 901 Bank of Commerce Building, Norfolk, Va., wants a 12x16 or 12x18 standard-gauge mogul locomotive.

Railway Equipment.—Jos. E. Bowen, 901 Bank of Commerce Building, Norfolk, Va., wants 20 standard-gauge dump cars and one Forney 18-ton standard-gauge locomotive.

Railway Equipment.—Macon Brick Co., 353 3d street, Macon, Ga., wants 20 or 25-pound rails; new or second-hand.

Refrigerating Machinery.—Botetourt Creamery Co., Fincastle, Va., wants prices on refrigerating machinery for creamery. (See "Ice Plant.")

Refrigerating Machinery.—R. J. Miller, Ballinger, Texas, wants prices on refrigerating machinery.

Refrigerating Machinery.—Blacksburg Power & Supply Co., Blacksburg, Va., wants to purchase fixtures for cold-storage plant.

Roofing.—Lands Lumber & Manufacturing

Washington, D. C., a quantity of naval supplies, as follows: Paint brushes, etc., crocus and emery cloth, sandpaper, aluminum paint, white lead, white zinc, paints, boiled and raw linseed oil, spirits of turpentine, damar varnish, sodium carbonate, lump chalk, soap. Applications for proposals should refer to Schedule 251. Blank proposals will be furnished on application to the bureau; H. T. B. Harris, paymaster-general, U. S. N.

Paving.—Board of Control, H. Hodges, chairman, Norfolk, Va., will receive bids until December 3 for improving Marshall avenue, Brambleton ward. An approximate schedule of work to be done is shown on blank form of proposal attached to specifications, which may be obtained at the bureau; H. T. B. Harris, paymaster-general, U. S. N.

Paving.—R. S. Williams, City Treasurer, Montgomery, Ala., will receive bids until December 3 for paving sidewalk on a portion of Pleasant avenue with hexagon block or Schillinger pavement. Certified check for \$100 must accompany each bid. Bids will also be received at the same time for paving sidewalks on Bell street with hexagon block or Schillinger pavement. Certified check for \$200 must accompany each bid; plans and specifications on file in the City Engineer's office; usual rights reserved.

Paving Material.—City of Columbia, S. C., wants suggestions as to best material for use in paving streets. About \$100,000 will be expended. Address R. C. Keenan, chairman of street committee.

Paving Material.—Board of Trade, Palatka, Fla., wants information and prices of various sidewalks and sidewalk material. Address H. M. de Montmollin, secretary.

Paving Material.—J. W. Birmingham & Co., Greenville, Miss., want to purchase crushed granite for sidewalk purposes.

Piping, etc.—General Pipe Line Co., Fort Smith, Ark., wants steel pipe and connections and valves for same.

Planing Machinery.—Carleton Lumber Co., Pineora, Ga., wants prices on planing-mill machinery.

Planing Mill.—See "Woodworking Machinery."

Plumbing Supplies.—Noble Smithson, president Knoxville Hardwood Fixture Co., Knoxville, Tenn., wants copper sheets, valves, supply pipes, waste pipes, floats, levers, hinges and other fittings for toilet tanks and seats.

Pump Well, etc.—Bids will be received until December 1 at the Bureau of Yards and Docks, Navy Department, Washington, D. C., for pump well, house and culverts, dry-dock No. 1, navy-yard, Charleston, S. C. Plans and specifications can be seen at the navy-yard, Charleston, S. C., or will be furnished by the bureau; Mordecai T. Endicott, chief of bureau.

Pumps.—American Turpentine & Tar Co., Ltd., New Basin and Broad street, New Orleans, La., will purchase three large pumps.

Railway Equipment.—J. F. Brand, Lithonia, Ga., wants prices on one-half mile 12-pound rails, three-foot-gauge tram rig and three or four dump cars with a capacity for hauling from 4000 to 6000 pounds granite at a load.

Railway Equipment.—S. G. Blalock, manager Kaup Lumber Co., Shubuta, Miss., wants two miles 35 pound relayers No. 1, together with splices, etc., and an 18-ton second-hand road engine, standard gauge.

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Railway Equipment.—Blacksburg Power & Supply Co., Blacksburg, Va., wants to purchase fixtures for cold-storage plant.

Roofing.—Lands Lumber & Manufacturing

Co., C. H. Elliott, general manager, Winnfield, La., wants roofing.

Roofing and Siding.—F. M. Allen, Lithonia, Ga., wants prices in quantities on metal roofing and siding for cottages.

Roofing Supplies.—See "Translucent Fabric."

Roofing.—Rev. W. E. M. Brogan, pastor Methodist Episcopal Church South, Okolona, Miss., wants slate and tin roofing.

Saw.—Florala Sawmill Co., Paxton, Fla., wants a one-man cross-cut saw that will cut very close to ground; something that will work by a lever in a frame, for use in cutting fat lightwood stumps just above ground for use in turpentine still.

Sawmill.—See "Woodworking Machinery."

Scales.—Columbian Hog & Cattle Powder Co., Kansas City, Mo., wants stationary floor scales.

Seating.—See "Church Furniture."

Sewerage System.—W. E. Thomas, clerk of Council, Roanoke, Va., will receive bids until November 19 for constructing sewers in Woodland Park.

Sewerage System.—Bids will be received until December 3 by Henry B. F. Macfarland, Henry L. West, John Biddle, Commissioners, District of Columbia, Washington, D. C., for constructing sewer in the District of Columbia. Forms, specifications and necessary information may be obtained at Room 43 District Building, Washington, D. C.

Sewerage System.—City of Greenville, N. C., Frank M. Wooten, Mayor, will open bids December 6 for constructing sewerage system and furnishing the materials for same. Work will embrace approximately four miles of pipe sewers from 8 inches to 15 inches in diameter. Plans and specifications will be on file and may be seen at the Mayor's offices, and copies of specifications, forms, etc., may be obtained from J. L. Ludlow, Winston, N. C., engineer; usual rights reserved. J. C. Tyson is Clerk.

Shredding Machinery.—See "Grinding Machinery."

Shirt Hangers.—Wilson Laundry Machinery Co., Columbia, Pa., wants addresses of manufacturers of collapsible shirt hangers.

Steam Shovel.—Jos. E. Bowen, 901 Bank of Commerce Building, Norfolk, Va., wants a 1½-yard steam shovel, Vulcan or Marlon.

Steam Shovel.—Houston & Liggett, Lewisburg, Tenn., want a second-hand traction steam shovel.

Tanks.—Bids marked "Proposals for Constructing Cisterns" and addressed to B. T. Clayton, captain quartermaster, will be received until December 7 at the quartermaster's office, United States army, New Orleans, La., for constructing 11 cypress cisterns at Fort St. Philip, La. Information furnished on application. United States reserves usual rights.

Telephones.—Shrewder & Metcalf Independent Telephone Co., Shrewder, O. T., wants to purchase telephones.

Textile Machinery.—Box 411, Memphis, Tenn., wants 24 slasher beams with heads 24 inches diameter and distance between heads 54 inches; good second-hand beams will answer.

Translucent Fabric.—C. B. Ford Company, Richmond, Va., wants addresses of manufacturers of translucent fabric for skylights, shop roofs, etc.

Water-wheels.—James Blalock, Snowflake, Va., wants prices on second-hand turbine water-wheels.

Water-works Equipment.—City of Crowley, La., wants 400 tons of six-inch water pipe, 60 hydrants, six tons of lead and complete equipment for laying five miles of six-inch water pipes. Address A. Durlo, Superintendent Water-works.

Well-drilling Machinery.—H. J. Reesink & Co., Zutphen, Havenstraat, Holland, wants illustrated catalogues of well-boring tools and machinery for water supply, and lowest prices and best cash terms for goods packed and crated for export and delivered f. o. b. ocean steamer New York or other American seaport.

Whetstone Machinery.—John S. Adair, Stephensport, Ky., wants to purchase machinery for manufacturing whetstones.

Whetstones.—Walter S. Crawford, R. F. D. No. 3, Hillsboro, N. C., wants addresses of manufacturers of whetstones from cement and grit; also persons handling emery grit, pumice stone, etc.

Wood Saw.—C. J. Mulkey, Westminster, S. C., wants prices on wood saw with frame complete.

Woodworking Machinery.—Lenoir Buggy Co., Lenoir, N. C., wants a light jointer and rounding machine combined; also hand saw: new or second-hand.

Woodworking Machinery.—Budde-Lindsay Manufacturing Co., Jackson, Tenn., wants one 26-inch surfer, single; one 26-inch cabinet planer, one cut-off saw, one self-feed rip saw, two 12-inch jointers, one 36-inch band saw, one scroll saw, two finish saws, one combination saw-boxing attachment, one single and cabinet tenon, one chain mortiser, one six-inch single sticker, one Bolts' corner, one turning lathe, one 42-inch three-drum sander, one 60-inch band resaw, one two-head shaper.

Woodworking Machinery.—Texas Tie & Timber Co., W. G. Burchfield, manager, Commercial Bank Building, Houston, Texas, wants machinery for making railroad ties, etc.

Woodworking Machinery.—Central Lumber Co., Brookhaven, Miss., wants saw and planing mill machinery and supplies.

Woodworking Machinery.—R. K. Singh & Bros., No. 769a Mianwali Punjab, India, wants to purchase woodworking machinery.

INDUSTRIAL NEWS OF INTEREST

A Lumber Plant.

A saw and planing mill near Monroe, La., is offered for sale by A. J. Herring of that city. Write for details.

Woodworking Machinery.

A quantity of spoke, rim and sawmill machinery is offered for sale by the Hollingsworth Wheel Co., Wheel, Md.

New Mexico Real Estate.

Real estate in New Mexico for homes, business or investment is offered for sale by E. G. Raffety, Room 87, No. 163 Randolph street, Chicago.

Southern Industries Offered.

Two offerings of the Louisiana Business Co., New Orleans, La., are an established lime plant and a sawmill. Inquiries are invited for details.

Sites Near Exposition.

Four sites between Norfolk and the Jamestown Exposition grounds are offered for sale, and full details can be obtained by writing to P. O. Box 384, Raleigh, N. C.

Opportunity in Real Estate.

An established real estate enterprise in Norfolk seeks to secure a competent manager who will become financially interested. For particulars address C. C. Walton, Norfolk, Va.

The Arthur Koppel Company.

The new offices of the Arthur Koppel Company, Industrial railways, Pittsburgh, Pa., are at 1601 Machesney Building, 225 Fourth avenue. This address was not correctly stated last week.

Southern Timber Lands.

Investors who may be prepared to buy timber lands in the South are invited to correspond with George A. Austin of Suffield, Conn. He offers several properties in the Carolinas.

Alpha Photo-Engraving Co.

The Alpha Photo-Engraving Co. announces its move toward better facilities. It is occupying its new building at the northeast corner of Howard and Fayette streets, Baltimore, Md.

A Manufacturing Property.

The Hollingsworth Wheel Co. of Wheel, Md., offers for sale a manufacturing plant—buildings, machinery, water-power, boiler, engine, electric-light plant—productive 112-acre farm, etc.

A Coal Mine Offered.

An operating coal mine in the Birmingham district is offered for sale for more complete development. Full particulars can be obtained by addressing Jerome A. Tucker, Birmingham, Ala.

Steel-Frame Building Contract.

The New York State Steel Co. of Buffalo, N. Y., has awarded contract to the Wm. B. Sciffo & Sons Company of Pittsburgh, Pa., for a large steel-frame building to be used as a machine and general repair shop.

Texas Farming Land.

Farming lands in the Brazos valley of Texas are being offered for sale by Hilhand E. Lockwood of San Antonio, Texas. He states the opportunities are good both for investment purchases and for development.

The Paul Steam System.

The Automatic Heating Co., owning and operating the Paul steam system, 17 Battery Place, New York, calls attention to the fact that it has branch office at Baltimore, Md., in the American Building, Walter E. Heg being manager.

To Europe for Business.

Mr. J. W. Dunphy, president of the Chicago (Ill.) Pneumatic Tool Co., sailed for Europe November 6 on a five-weeks' trip in the interest of his company. He will visit the important trades generally in England, Scotland, France and Germany.

Steel Wheels and Vehicles.

Operators who require steel wheels of any kind, handy wagons, wood wagons with steel wheels, steel wagons with steel wheels, log wagons and heavy traction wagons, etc., are invited to investigate the products of the Electric Wheel Co., Box 550, Quincy, Ill.

Construction Superintendent Seeks Engagement.

A construction superintendent of 27 years' experience seeks an engagement on shovel work or tracklaying. For information address No. 29, care of the Manufacturers' Record, Baltimore, Md.

Seeking Industrial Opportunities?

Those who may be seeking industrial opportunities in Texas are invited to address R. R. Clardige, Palestine, Texas. Mr. Clardige's offerings include pine and hardwood timber lands, lands for colonization, waterworks and other industrial plants.

For Representation in South.

An experienced salesman acquainted in the mechanical and purchasing departments of railroad systems and manufactures in the South wants to represent some responsible Eastern or Western enterprise. For details address No. 32, care of Manufacturers' Record, Baltimore, Md.

Adapted for Paper Manufacturing.

Manufacturers who may contemplate utilizing cotton stalks in the production of paper are invited to correspond with A. W. Barnhart of Barnhart, Mo. He has a location on the Memphis Southern Railroad, 28 miles from St. Louis, believed to be especially adapted for the class of manufacture mentioned.

For Information on Florida.

Those who may be interested in purchasing Florida properties are invited to write to Albertus Vogt of Lakeland, Fla. Mr. Vogt has lived in Florida 40 years and has had experience as a civil and mining engineer throughout the State. He offers phosphate lands or mines, stock and truck farms, pine or cypress timber lands and orange groves.

A Recent Rebuilding Contract.

The experience of the Selden-Breck Construction Co. has been so varied and extensive that it undertakes to carry through building projects of any magnitude and of any design. The company was the contractor for the complete rebuilding of the Louisville & Nashville Railroad station at Louisville. Its offices are in the Fullerton Building, St. Louis, Mo.

Another Order Secured.

In addition to the orders recently secured by the Atmospheric Condensation Co., 724 Main street, Kansas City, Mo., is one from the Citizens' Ice Co., San Antonio, Texas, operating a 40-ton plant. The installation will be of four flasks of the Pennel flask type condenser, each 8x6 feet by 6 inches. This form of condenser is to remove the scale from the boiler feed, and permits the manufacture of crystal ice without rebelling.

Office and Store Fixtures.

Mr. H. M. Wade, treasurer of the Cochrane Showcase Co., Charlotte, N. C., contemplates establishing an agency for office and store fixtures of all kinds, safes, typewriters, desks, office chairs, display stands, files, etc. He receives many inquiries for fixtures which his company does not manufacture, and being desirous of meeting the demand, requests manufacturers of the above-named articles to correspond with him.

Want to Buy Florida Properties?

Those who may be desirous of purchasing properties in Florida, either for homes, investment or development purposes, are invited to investigate the offerings of the Currie Investment Co. This company is located at West Palm Beach, Fla., and offers winter homes, lands for cultivating pineapples, oranges, vegetables, etc., and other real estate. It buys, sells and takes care of Florida properties for the owners.

Mr. Charles K. Cooper, Consulting Engineer.

Mr. Charles K. Cooper, for 16 years chief engineer of the Mutual Life Insurance Co.'s buildings, New York, has resigned his position and is now associated as consulting engineer with the American Air Compressor Works, 26 Cortlandt street, New York city. This company is well known as a manufacturer of air compressors for all purposes and pressures, compressed-air tools and appliances.

Belting in Demand.

The Shultz Belting Co. of St. Louis, Mo., manufacturers of the well-known "Sable" raw-hide belting, has found business particularly good this year. Its business up to November 1 was ahead of 1905, which in turn was the best year the company has had in its 34 years' existence. It is to be noted that as an indication of the wide acquaintance of this belting a number of orders have been for export shipments, including some large sizes to far-distant countries.

New Allis-Chalmers Bulletin.

The Allis-Chalmers Company, Milwaukee, Wis., is about to issue a new bulletin describing its direct-current engine-type generators, designed for general lighting and power work, in connection with steam, gas or oil engines. These generators, which are built for standard pressures, speeds and outputs, have a reputation for reliability and satisfactory performance under widely-varying conditions of service, and their design is liberal in all parts.

Recent Ruggles-Coles Sales.

The Ruggles-Coles Engineering Co., offices in New York and Chicago, reports the following sales of its drying machines during October: Three for Oklahoma Portland Cement Co., Ada, I. T.; one for Chicago Portland Cement Co., Oglesby, Ill.; six for Iowa Portland Cement Co., Mason City, Iowa; six for Dixie Portland Cement Co., Bridgeport, Tenn.; two for Almadene Portland Cement Co., Havana, Cuba; three for Pennsylvania Portland Cement Co., Bath, Pa.; one for Empire Gypsum Co., Garbutt, N. Y.; one for Continental Graphite Co., Byers, Pa., and one for U. S. Graphite Co., Byers, Pa.

Enlarging Its Plant.

Demands for the products of the Solid Steel Tool & Forge Co. of Brackenridge, Pa., make it necessary for that company's capacity to be increased. Accordingly, its dry-sinking capacity is being doubled by the addition of new machinery, this being absolutely necessary in order to meet increased hammer capacity. This will enable to make much quicker delivery of orders for forgings where new dies are needed to get out the work. The force of machinists is also being increased in order to keep up repairs necessitated by the increased volume of business of the company's various lines of forgings.

Covering for Cold-Water Pipes.

Considerable trouble, annoyance and expense is caused in cold weather by the freezing of water pipes, especially where these are openly exposed to the outside air. The H. W. Johns-Manville Company of 100 William street, New York, has a covering which is sold under the trade name of "Zero," which effectively prevents freezing of pipes during cold weather. This covering consists of a combination of hair felt and wool felt, which possesses the highest insulating qualities. For ordinary conditions one layer of this covering is sufficient, but where pipes are exposed to the weather two thicknesses should be used.

Southern-Built Brick Machinery.

Building activity in the South is calling for great quantities of bricks. Plants for manufacturing these bricks are being established in all sections, and a large part of the mechanical equipment is being furnished by Southern builders of brick machinery. Messrs. J. C. Steele & Sons of Statesville, N. C., are prominent in this class. They have recently closed contract, including the following: Plant of 40,000 daily capacity at Greenville, S. C.; 25,000 at Greelyville, S. C.; 40,000 at Biloxi, Miss.; 25,000 at Camp Hill, Ala.; 25,000 at Cherryville, N. C.; 25,000 at Charlotte, N. C.; 40,000 at Louisburg, N. C.; 25,000 at Mooresville, N. C., and 75,000 at Montgomery, Ala.

The Consolidated Electric Co.

The continuation of industrial development in the South and activity in building construction is keeping up the demand for electrical machinery and supplies of all kinds. This demand is being met largely by active Southern companies, among these being the Consolidated Electric Co. of Norfolk, Va. This company acts as an electrical contract-

or for power plants, street railways, electric-lighting plants, telephone installations, commercial and marine wiring, etc., besides handling general machinery and supplies. Its trade has increased to such an extent recently that new and more extensive accommodations have been secured at 38 Monticello avenue, where it is now located.

Portland Cement News.

That work in Portland cement continues unabated is shown by several important details. One of the customers of the St. Louis (Mo.) Portland Cement Co. between April 1 and November 1 consumed 235,000 barrels. Mr. A. H. Craney, Jr., of the St. Louis Portland Cement Co., in commenting on this recently, said that the immense movement in cement was particularly marked in the South, and that there was every reason to believe that the present prices would be maintained. The continued demand has kept up for so long a time that most of the cementmakers today have very little if any Portland cement in their storehouses. The "Red Ring" brand, manufactured by the St. Louis company, has met with a large demand.

Referring to Time Registers.

It is noticeable that the use of the time recorder is becoming almost universal, due to the varied features of business it can cover. The Dey Time Register Co. of Syracuse, N. Y., with branch offices in all large cities, is showing at its St. Louis office, 310 Equitable Building, in charge of J. A. Dougherty, a new feature of the dial and card machines. This is a two-colored ribbon which shifts automatically, which shows all late arrivals, early quittors or overtime registrations in red, the regular time registrations being made in green. It is claimed for the machine that it saves the time in the office by reason of the fact that it is not necessary to scrutinize the entire record, but only a small percentage of it, which will be recorded in red.

Metallic Paints, Mortar Colors, Etc.

For Southern consumption there are demanded large quantities of metallic paints, mortar colors, manganese for brickmakers and various other products of a kindred character. This trade is being met to a large extent by Southern manufacturers, prominent among whom is the Chattanooga Paint Co. of Chattanooga, Tenn. The company's "Eclipse" mortar colors are strong and economical, in red, brown, buff and black. Its red oxide of iron paint is used largely for tin, iron and shingle roofs, railroad cars, bridges, barns, fences, outbuildings, and recommended for any place where protection from the weather is desired. These paints are used largely in big plants for making carriages and wagons and by paint grinders. Write A. E. Tucker, manager, for price-lists.

New Hayden Branch Office.

The Hayden Automatic Block Machine Co. of Columbus, Ohio, announces having established a branch office in Room No. 415 Real Estate Building, at No. 821 Chestnut street, St. Louis, Mo. This company has become well known as a manufacturer of machines for making concrete blocks for building work of any description, automatic power mixers and rock crushers. Mr. James McD. Hunter is manager of the St. Louis office. The company says: "interesting tests have recently been made by Boston purchasers of the Hayden machine of blocks made on this machine. A block submitted to the United States arsenal at Watertown showed a maximum compressed strength of 800,000 pounds without any fracture, this being as high as the Government machine was capable of testing. In another case, to determine the non-porous qualities of the block, a block made on the Hayden machine was immersed in water for 24 hours, and when taken out showed that only one-third per cent. in weight had been taken up during the immersion."

The W. K. Palmer Engineering Organization.

Among the leading consulting engineers who have become prominent during recent years is W. K. Palmer of Kansas City, Mo. Mr. Palmer has recently reorganized his forces under the title of the W. K. Palmer Company, and has so arranged each department that there will be no delay in determining engineering questions. Capable men have been appointed to the respective positions. Directly under Mr. Palmer are two departments—the strictly business and the strictly engineering. Mr. O. E. Wheelock, the business manager, is in charge of all accounts, collections, contracts and the numerous details of office. Mr. E. T. Archer is chief engineer in charge of the engineering branch. The segregation of the two im-

portant parts of the company's affairs promotes the smoothness of office life. Mr. E. G. Frost is assistant chief engineer directly under Mr. Archer. In the engineering department are placed the Memphis (Tenn.) branch office, with W. B. Rollins in charge; the drafting-room force, under the leadership of F. F. Hillyer, and the field staff, A. M. Meyers, chief locating engineer, in command of a corps of civil engineers. It is announced that the W. K. Palmer Company's offices are in the Dwight Building, Kansas City.

Lubrication in Factory Economy.

A factor that has direct bearing on the cost of manufacture is the lubricating of machinery. Yet it is doubtful if there is another item connected with the operation of the average plant less understood by owners, their managers and superintendents. The mechanical installation is of the highest known efficiency; everything is done in the equipment of a plant to secure economy in its operation. After this is done frequently a long step is taken in the opposite direction by the use of a lubricant unsuited to the existing conditions. A lubricant is not merely to secure quiet running of engines and machinery with temperatures of the bearings not alarmingly high, but, primarily, to reduce friction and wear to a minimum, and a lubricant that will do this is the best to use, no matter what the price may be. An experienced lubricant manufacturer says:

"Few realize the great loss in power due to the friction of wearing parts. It may probably be fairly estimated that one-half the power expended in the average case is wasted on lost work being consumed in overcoming the friction of lubricated surfaces, and a reduction of 50 per cent. in the work lost by friction has often been secured by a change of lubricants. Among the expenses chargeable to waste power, due to inferior lubrication, may be included the cost of power produced in excess of that really required and wear and tear of machinery, which is constantly doing more work than should be required of it. It is most difficult to do more than point out the danger due to the use of inferior lubricants, there being so many substitutes placed on the market with a schedule of laboratory tests which are useless and misleading to anyone other than a manufacturer of lubricants, who makes use of them merely as a means of insuring uniformity in his manufactured products, and not as a measure whereby to judge their practical value. As a general guide in purchasing a lubricant it might be said that a grease which is uniform in quality, every part of which is lubricant and will not gum or leave a sediment, is of the greater value. From many careful experiments and tests made it is certain that a grease such as 'Albany Grease' contains all the elements for perfect lubrication and is the best and most economical for any bearing. It is a purely animal grease, free from destructive acids, and will lubricate and preserve the bearings of machinery, as it has done for nearly 40 years. Having comparatively low melting points for the different consistencies, it will more readily melt, and thus lubricate, cool and preserve a bearing which from carelessness, inattention or the improper placing or setting of cups would otherwise burn or cut out and be practically destroyed by the use of mineral grease with high melting points. Albany grease, which is of the hardest consistency made, with the highest melting point 175 degrees, will melt and flow over the bearing, lubricating and cooling it, on account of its peculiar properties, long before the heat of the bearing has reached the danger point." Messrs. Adam Cook's Sons of New York manufacture Albany grease.

TRADE LITERATURE.

Klein Water-Cooling Tower.

The De La Vergne Machine Co., foot of East 138th street, New York city, has just issued a folder describing the Klein water-cooling tower which it builds. This tower will cool the water to from 5 to 15 degrees below the temperature of the atmosphere.

Sturtevant High-Pressure Blower.

For more than 40 years the Sturtevant fan blowers and exhausters have enjoyed a worldwide reputation for quality and efficiency. Today they are to be found wherever air is required—in industrial plants, mines, public buildings, on steamships and elsewhere. The Sturtevant high-pressure blowers are designed for handling air or gas at any pressure below 10 pounds per square inch. They may be used to advantage in supplying air blasts for foundry cupolas, forge fires, smelting furnaces, pneumatic-tube systems, moving granular material, etc. They are of the so-called positive type and manufactured in a variety of sizes and capacities ranging from five cubic feet to over

15,000 cubic feet per minute. A complete description, accompanied by numerous photographic views, diagrams, tables and other data, is presented in Catalogue 140 issued by B. F. Sturtevant & Co. of Boston. The Sturtevant horizontal-engine units for driving Sturtevant blowers are also described.

CLARKSVILLE IN BUSINESS.

Many Activities Flourish in the Tennessee City.

[Special Cor. Manufacturers' Record.]

Clarksville, Tenn., November 5.

Tennessee has started on the second century of its Statehood with a swinging stride that betokens both confidence in its destiny and the strength to fulfill it. From a past of achievement she advances to a future of promise with all the hopefulness of conscious power. The State takes its name from that given by the Indians to the Little Tennessee river—Tannassee. The towns of the State are seats of learning, centers of busy trade and the homes of a people who are under marching orders in every way of progress. Their growth has been natural and steady, and as a result healthy. In recent years increasing attention has been paid to manufacturing interests, and advantage has been taken of the conjunction of coal and iron in abundance to promote iron industries.

One of the progressive towns in Tennessee is Clarksville, which is situated at the confluence of the Cumberland and Red rivers in Montgomery county. It lies in a narrow peninsula, hemmed in by the waters of these two streams, and occupies high rolling ground, which not only adds to the beauty of its site, but affords splendid natural drainage and insures health. The main business portion of the city is on the bank of and overlooking the Cumberland river, which is navigable to this point at all seasons of the year. Clarksville is about 30 miles below Harpeth Shoals, on the Cumberland river, and about 65 miles by water below Nashville. At low water it is practically the head of navigation. Its educational advantages, its healthfulness and the beauty of its surroundings cannot be surpassed by any town of its size in the Union. It is needless to add that it has a most abundant water supply for all purposes. The climate of middle Tennessee is exceptional. The mercury rarely rises above 90 in the summer, and not once in 10 years goes below zero in winter. The cold snaps are only of a few days' duration, and whole winters frequently pass without snow or ice of any thickness. The staple products are tobacco, corn, wheat, rye, oats, potatoes and fruit. Stock-raising has grown to be an important industry of late, and some of the fine-bred horses and cattle in the country are to be found in Montgomery county. Less than 50 miles away are the cotton fields of West Tennessee.

Clarksville ranks as the second largest planters' tobacco market in the United States. It has many handsome private residences, and the character of her public buildings speaks well for the enterprise of her citizens. The county courthouse is conceded to be one of the best in the State. It was completed a few years since at a cost of more than \$100,000. The Tobacco Exchange is a beautiful and costly building erected by the Tobacco Board of Trade. Nearly every Christian denomination is represented in this town, and the architectural beauty and finish of the churches is striking.

It is to Clarksville as a business point that the writer wishes to direct special attention. It has a system of water-works, a gas company, electric-light company supplying many homes and public buildings, a telephone exchange and efficient fire department, nearly five miles of electric railways and several hotels. Clarksville has three banks with an aggregate capital of over \$300,000 and a deposit account of

over \$1,000,000. At the present time several large buildings are in course of construction. The American Snuff Co.'s buildings are being erected by the Ferro-Concrete Construction Co. of Cincinnati, Ohio. The curing building will be five stories high, 200 feet long and 105 feet wide. The foundations and interior supporting columns will be entirely of reinforced concrete. To the left of this building will be the grinding building, which will be three stories in height. In the rear of this building will be the power plant, and in the rear of the curing building the power-house will be erected. With the construction of these mammoth buildings and those of the Dunlap Milling Co., which have been described in these columns, a new era in Clarksville's industrial development has begun. The credit for securing the American Snuff Co.'s plant for Clarksville is due to the hustling Chamber of Commerce, for I am told the site for this plant had been purchased in another city. This will be the largest snuff factory in the world, producing about 10,000,000 pounds annually.

The Chamber of Commerce of Clarksville has entered upon a campaign to induce manufacturers to locate here, and it is entirely reasonable to infer from the good work that is being done that they will be successful. Its motto is "smokestacks and whistles," and everybody is bending an effort to realize this condition. Two very essential things are necessary for town building. One is to have a trade organization up to date and a board of directors who direct not in a perfunctory way, but ever on the alert and losing no opportunity to benefit the city when it is possible to do so. The writer had an opportunity of meeting the gentlemen comprising Clarksville's Chamber of Commerce, and he found them to be a very aggressive and progressive set of business men with a determination to contribute to the growth of the city. Another essential thing is to have a competent secretary, one who is looking primarily and persistently to the growth of the town—a man who is broad-minded and ever quick to interest outside people in the claims which he makes, and in such a forcible manner that those who are approached believe in him. Such a man as this is the secretary of the Chamber of Commerce, Mr. Earle M. Cary. Mr. Cary is an experienced railroad man, having been in the railroad business for 15 years in various capacities. He was six years in Knoxville, seven years with the Michigan Central Railway in Cincinnati as traveling freight agent, and later with the C. H. & D. Railroad as commercial agent in Nashville. He has traveled a great deal in the Southeast with success, and has seen the wonderful and rapid growth of many other cities not favored as Clarksville which are objectionless. The Chamber of Commerce is to be congratulated on securing the services of such a secretary. All that is needed is an effort to make Clarksville one of the successful manufacturing centers of the new South, and this effort is being made by this organization. The president of the Chamber of Commerce, Mr. M. A. Stratton; the vice-president, Mr. Joe P. Dunlop; secretary, Mr. Earle M. Cary, and the chairman of publicity, Mr. Guy R. Johnson, are bending their efforts to interest outside people. The Clarksville Foundry & Machine Co., of which Mr. Guy R. Johnson is the president, is a new concern recently started which from the very beginning has been a success. It is well equipped with modern machinery, and they are prepared to execute any kind of special machine work. Any further information regarding Clarksville will be cheerfully given by addressing the secretary.

I. S. FIELD.

FINANCIAL NEWS**Review of the Baltimore Market.**

Office MANUFACTURERS' RECORD,

Baltimore, Md., November 14.

In the Baltimore stock market during the past week prices were steady. United Railways common sold from 15½ to 15½; do. incomes, Maryland Trust certificates, from 69½ to 69½; the funding 5s from 89½ to 89½, and the 4s at 88½ to 89½; United Light & Power 4½s, 93½; Seaboard new common, 24 to 24½; do. 4s, 82½ to 83; do. 10-year 5s, 100½; Consolidated Cotton Duck preferred, 33½ to 33½; Mt. Vernon-Woodberry Cotton Duck 5s, 83 to 82½; G.-B.-S. Brewing incomes, 34 to 33; do. 1sts, 58½; Consolidated Gas, Electric Light & Power preferred, 80.

Maryland Bank sold from 21 to 20; Commercial and Farmers' Bank, blue certificates, 131½ to 130; Mechanics' Bank, 26½; Howard Bank, 12½; Bank of Commerce, 26½; Maryland Casualty, 59½ to 59; United States Fidelity, 115; First National Bank, 130.

Other securities were traded in as follows: Northern Central Railroad stock, 108½ to 107½; Baltimore Refrigerating & Heating common, 21½ to 24%; Suffol & Carolina 5s, 90½; Virginia Midland 5ths, 110; City & Suburban (Washington) 5s, 104; Norfolk Railway & Light stock, 18½; do. 5s, 98½; Georgia & Alabama 5s, 109½; Georgia, Carolina & Northern 5s, 109½ to 110; South Bound 5s, 110½; Houston Oil common, 10½ to 9½; do. preferred, 48; Atlantic Coast Line Consolidated 4s, 97% to 97½; do. new 4s, certificates, 91; Anacostia & Potomac 5s, 103½; Charleston & Western Carolina 5s, 110 to 110½; Baltimore City 3½s, 1930, 101½ to 101½; Southern Railway common, 32; Georgia Pacific 1sts, 120%; Georgia Southern & Florida 5s, 111½; Northern Central 4½s, 108½; do. 5s B., 115%; Wilmington & Weldon 5s, 116½ to 116½; West Virginia Central 6s, 107; George's Creek Coal & Iron, 75; Baltimore City Passenger 5s, 103; Central Railway 5s, 113; Virginia Midland general mortgage 5s, 111½; Detroit United 4½s, 93½; Charleston City Railway 5s, 106½; Carolina Central 4s, 95½; Con & Iron Railway 5s, 105.

SECURITIES AT BALTIMORE.**Last Quotations for the Week Ended November 14, 1906.**

Railroad Stocks.	Par.	Bid.	Asked.
Atlantic Coast of Conn.	100	350	350
Georgia Sou. & Fla.	100	32	40
Georgia Sou. & Fla. 1st Pfd.	100	97	....
Georgia Sou. & Fla. 2d Pfd.	100	80	85
Maryland & Pennsylvania.	100	36	....
Norfolk Railway & Light.	25	18	19
Seaboard Company Common.	100	24	24½
Seaboard Company 2d Pfd.	100	51	53
Southern Railway (V. T.).	100	32	....
United Railways & Elec. Co.	50	15½	15%
Western Maryland.	15	20	....

Bank Stocks.

Citizens' National Bank.	10	29	30
Commercial & Far. Nat. Bank.	100	120	....
Com. & Far. Nat. Blk. Blue Cfts.	100	130	140
First National Bank.	100	135	145
German-American Bank.	100	109	....
German Bank.	100	10	....
Maryland National Bank.	20	21	....
MERCHANT'S NATIONAL BANK.	100	175	178
National Bank of Baltimore.	100	115	125
National Bank of Commerce.	15	26½	....
National Exchange Bank.	100	176	182½
National Howard Bank.	10	12½	....
National Marine Bank.	30	38	....
National Mechanics' Bank.	10	26½	....
National Union Bank of Md.	100	114	....
Western National Bank.	20	37	....

Trust, Fidelity and Casualty Stocks.

American Bonding & Trust.	50	40	50
Fidelity & Deposit.	50	132	133½
International Trust.	100	150	....
Maryland Casualty.	25	58½	59½
Maryland Trust.	100	10	110
Mercantile Trust & Deposit.	50	137	140
Union Trust.	50	55	65
United Surety.	100	125	....
U. S. Fidelity & Guaranty.	100	114	118

Miscellaneous Stocks.

Ala. Con. Coal & Iron.	100	55	65
Ala. Con. Coal & Iron Pfd.	100	91	94
Con. Cotton Duck Common.	50	12	13
Con. Cotton Duck Pfd.	50	33	34
Con. Gas, Elec. Lt. & P. Com.	25	40	....
Con. Gas, Elec. Lt. & P. Pfd.	50	85	....
Consolidation Coal.	100	96	96½
G.-B.-S. Brewing Co.	100	8	....
George's Creek Coal.	100	....	76

Railroad Bonds.

Ala. & Northern 5s, 1946.	95	....
Atlanta & Charlotte 1st 7s, 1907.	102½	....

Atlantic Coast Line 1st 4s, 1952.	97%	97%
Atlantic Coast Line 4s, Cfts.	91	91
Carolina Central 4s, 1949.	95	....
Central of Georgia 2d Inc.	65	67
Charleston & West. Car. 5s, 1946.	110	110½
Char. Col. & Aug. 1st 5s, 1910.	116	....
Char. Col. & Aug. 2d 7s, 1910.	109½	110%
Coal & Iron Railway 5s, 1920.	105	105½
Georgia & Alabama 5s, 1945.	109½	109%
Ga. Car. & North. 1st 5s, 1929.	110	110½
Georgia Pacific 1st 6s, 1922.	119	121½
Ga. Sou. Fla. 1st 5s, 1945.	111½	....
Petersburg, Class A 5s, 1926.	113½	114
Piedmont & Cum. 1st 5s, 1911.	102	....
Potomac Valley 1st 5s, 1941.	113	....
Raleigh & Augusta 1st 6s, 1926.	122	....
Richmond & Danville 5s.	110	....
Rich. & Danville Gold 6s, 1915.	115	....
Sav. Fla. & West. 5s, 1934.	128½	....
Seaboard Air Line 4s, 1950.	82	83
Seaboard Air Line 5s, 10-year, 1911.	100½	100%
South Bound 5s, 1941.	110½	111½
Suffolk & Carolina 5s, 1952.	99	99½
Virginia Midland 1st 6s, 1911.	107½	108½
Virginia Midland G. M. 5s.	110½	111%
Virginia Midland 5th 5s, 1926.	109½	....
Western Maryland new 4s.	83½	84½
W. Va. Central 1st 6s, 1911.	106½	107½
Wil. Col. & Aug. 6s, 1910.	107½	107½
Wil. & Wel. Gold 5s, 1933.	116	116½

Street Railway Bonds.

Anacostia & Potomac 5s, 1949.	102½	103½
Augusta Ry. & Elec. 5s, 1940.	105	....
Balto. City Pass. 5s, 1911.	103	103½
Central Ry. Con. 5s (Balto.), 1932.	111	113½
Charleston City Ry. 5s, 1923.	105½	....
Charleston Con. Elec. 5s, 1999.	94½	....
City & Suburban 5s (Balto.), 1922.	110½	....
City & Suburban 5s (Wash.).	104	104½
Knoxville Traction 1st 5s, 1928.	105	....
Lexington Ry. 1st 5s, 1949.	102	....
Macon Ry. & Lt. 1st Con. 5s, 1953.	97	98½
Newport News & Old Pt. 5s, 1938.	93	....
Norfolk Railway & Light 5s.	98	98½
North Baltimore 5s, 1942.	116	....
United Railways 1st 4s, 1949.	88½	89
United Railways Inc. 4s, 1949.	69½	....
U. Rys. Inc. 4s, 1949, Md. Tr. Cfts.	69½	69½
United Railways Funding 5s.	89	89½

Miscellaneous Bonds.

Ala. Con. Coal & Iron 5s.	91	92½
Con. Gas 6s, 1910.	106½	....
Con. Gas 5s, 1939.	109½	....
Con. Gas 4½s, Cfts.	97	....
G.-B.-S. Brewing 1sts.	58	58½
Illino. & Woodberry Cot. Duck 5s.	82½	83
United Elec. Lt. & Power 4½s.	93	....

SOUTHERN COTTON-MILL STOCKS.

Quotations Furnished by Hugh Macne & Co., Wilmington, N. C., for Week Ending November 12.		
Bid.	Asked.	
Abbeville Cotton Mills (S. C.)	94	95
Aiken Mfg. Co. (S. C.)	80	87½
Anderson Cotton Mills (S. C.)	100	....
Arkwright Mills (S. C.)	122	....
Augusta Factory (Ga.)	80	85
Avondale Mills (Ala.)	109	116
Bolton Mills (S. C.)	106	110
Bibb Mfg. Co. (Ga.)	122	....
Brandon Mills (S. C.)	118	120
Cabarrus Cot. Mills (N. C.) Pfd.	120	130
Chadwick Mfg. Co. (N. C.) Pfd.	102	102
Chiquila Mfg. Co. (S. C.)	95	96
Tifton Mfg. Co. (S. C.)	122	124
Clifton Mfg. Co. (S. C.) Pfd.	102	103
Clinton Cotton Mills (S. C.)	133	146
Columbus Mfg. Co. (Ga.)	96	101
Courtenay Mfg. Co. (S. C.)	100	....
Dallas Mfg. Co. (Ala.)	92	95
Darlington Mfg. Co. (S. C.)	59	61
Eagle & Phenix Mills (Ga.)	129	130
Easley Cotton Mills (S. C.)	132	135
Enoree Mfg. Co. (S. C.)	80	81
Enoree Mfg. Co. (S. C.) Pfd.	99	101
Enterprise Mfg. Co. (Ga.)	86	92
Exposition Cotton Mills (Ga.)	200	....
Gaffney Mfg. Co. (S. C.)	99	....
Gainesville Cotton Mills (S. C.)	37	40
Granby Cot. Mills (S. C.) 1st Pfd.	59	66
Graniteville Mfg. Co. (S. C.)	160	....
Greenwood Cotton Mills (S. C.)	91	....
Grendel Mills (S. C.)	114	117
Henrietta Mills (N. C.)	100	....
Klug Mfg. Co., John P. (Ga.)	97	103
Lancaster Cotton Mills (S. C.)	105	110
Lancaster Cot. Mills (S. C.) Pfd.	97	100
Langley Mfg. Co. (S. C.)	92	96
Laurens Cotton Mills (S. C.)	166	....
Limestone Mills (N. C.)	115	....
Lockhart Mills (S. C.)	101	....
Lockhart Mills (S. C.) Pfd.	97	100
Louis Mfg. Co. (N. C.)	90	95
Louis Mfg. Co. (N. C.) Pfd.	102	....
Marlboro Cotton Mills (S. C.)	82½	....
Mayo Mills (N. C.)	165	185
Mills Mfg. Co. (S. C.)	105	....
Monaghan Mills (S. C.)	96½	101
Monarch Cotton Mills (S. C.)	96	100
Newberry Cotton Mills (S. C.)	118	....
Norris Cotton Mills (S. C.)	108	110
Olympia Cot. Mills (S. C.) 1st Pfd.	80	97
Orangeburg Mfg. Co. (S. C.) 1st Pfd.	101	104
Orr Cotton Mills (S. C.)	101
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